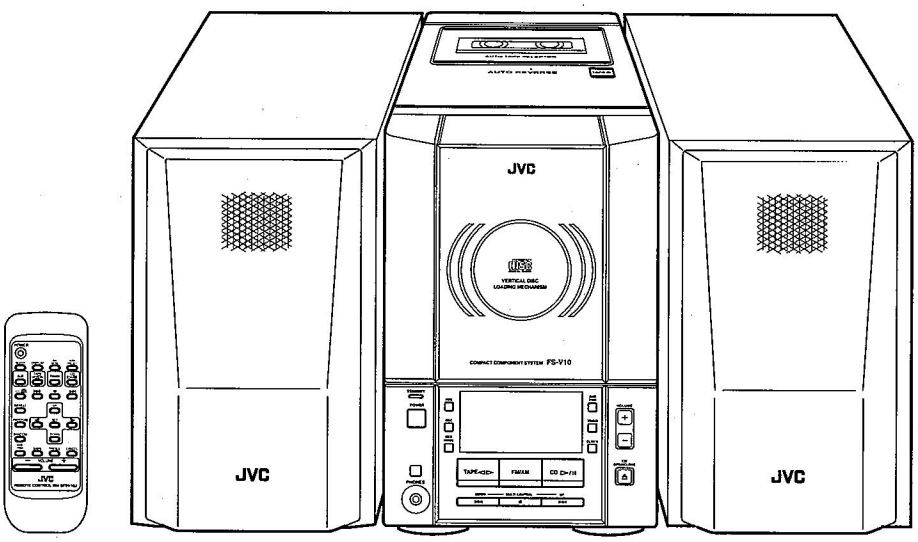
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

FS-V10



COMPACT disc DIGITAL AUDIO

Area Suffix	
J	U.S.A.

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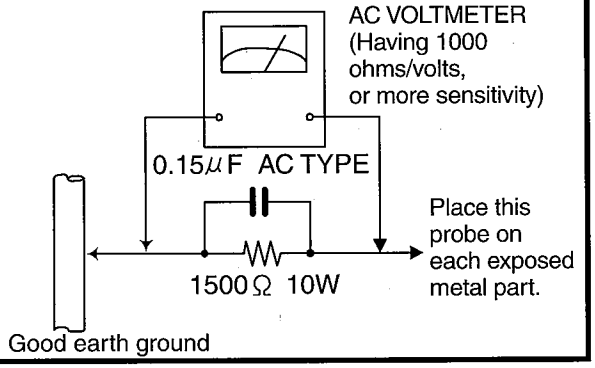
No.20837
May. 2000

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet , particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to eachexposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured Any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).

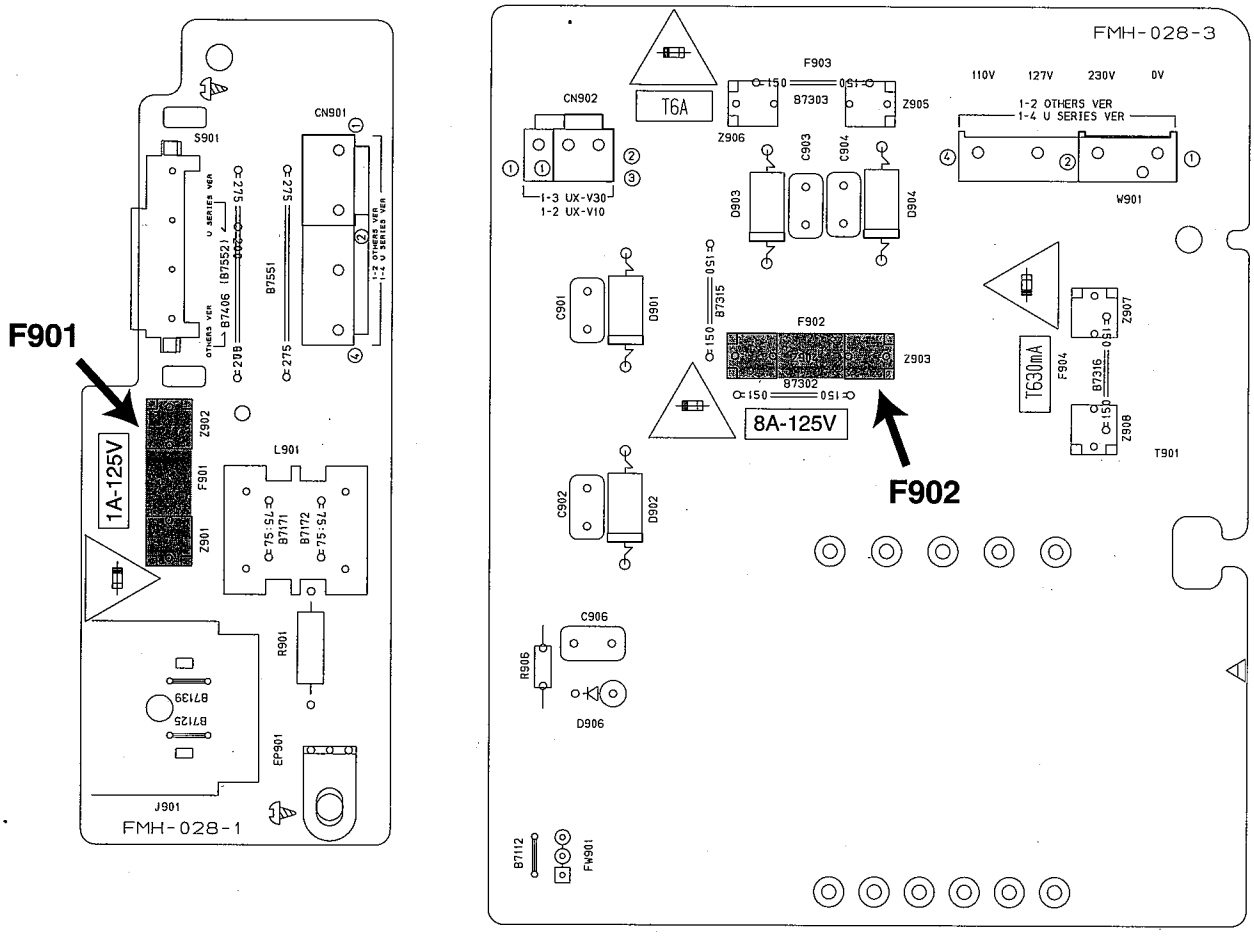


Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

Importance administering point on the safety



For USA and Canada / pour États - Unis d' Amérique et Canada

Caution: For continued protection against risk of fire, replace only with same type 1A-125V for F901 and 8A-125V for F902.
This symbol specifies type of fast operating fuse.

Précaution: Pour eviter risques de feux, remplacez le fusible de sureté de F901 comme le meme type que 1A-125V, et 8A-125V pour F902.
Ce sont des fusibles sûretes qui functionnes rapide.

Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

4.CAUTION : The compact disc player uses invisible laserradiation and is equipped with safety switches whichprevent emission of radiation when the drawer is open and the safety interlocks have failed or are de feated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ ***CAUTION*** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

VARNING : Osynlig laserstrålning är denna del är öppnad och spårren är urkopplad. Betrakta ej strålen.

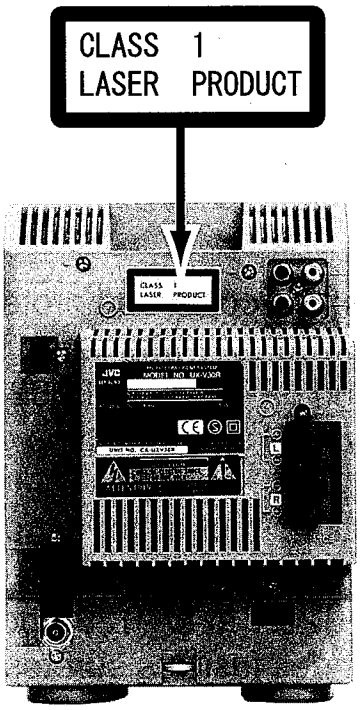
VARO : Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle.Älä katso säteeseen.

ADVARSEL : Usynlig laserstråling ved åbning , når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

ADVARSEL : Usynlig laserstråling ved åpning,når sikkerhetsbryteren er avslott. unngå utsettelse for stråling.

REPRODUCTION AND POSITION OF LABELS

WARNING LABEL

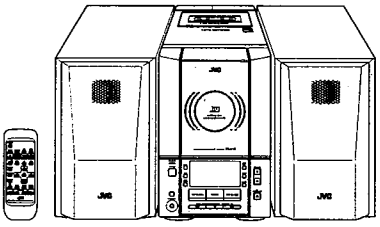


Instructions

JVC

COMPACT COMPONENT SYSTEM
SYSTEME DE COMPOSANTS COMPACT

FS-V10



COMPACT DIGITAL AUDIO

INSTRUCTIONS
MANUEL D'INSTRUCTIONS

For Customer Use:
Enter below the Model No. and Serial No. which are located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No.

Serial No.

GVT0031-001A
[J/(C)]

English

Français

For Canada/pour le Canada
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

For Canada/pour le Canada
THIS DIGITAL APPARATUS DOES NOT EXCEED THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS FROM DIGITAL APPARATUS AS SET OUT IN THE INTERFERENCE-CAUSING EQUIPMENT STANDARD ENTITLED "DIGITAL APPARATUS," ICES-003 OF THE DEPARTMENT OF COMMUNICATIONS.
CET APPAREIL NUMERIQUE RESPECTE LES LIMITES DE BRUITS RADIOELECTRIQUES APPLICABLES AUX APPAREILS NUMIRIQUES DE CLASSE B PRESCRITES DANS LA NORME SUR LE MATERIEL BROUILLEUR: "APPAREILS NUMERIQUES", NMB-003 EDICTEE PAR LE MINISTRE DES COMMUNICATIONS.

Warnings, Cautions and Others
Mises en garde, précautions et indications diverses

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN
CAUTION. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For U.S.A.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio/TV technician for help.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION
To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

ATTENTION
Afin d'éviter tout risque d'électrocution, d'incendie, etc.:
1. Ne pas enlever les vis ni les panneaux et ne pas ouvrir le coffret de l'appareil.
2. Ne pas exposer l'appareil à la pluie ni à l'humidité.

Caution — POWER switch!
Disconnect the mains plug to shut the power off completely. The POWER switch in any position does not disconnect the mains line. The power can be remote controlled.

Attention — Commutateur POWER!
Déconnecter la fiche de secteur pour couper complètement le courant. Le commutateur POWER ne coupe jamais complètement la ligne de secteur, quelle que soit sa position. Le courant peut être télécommandé.

1. CLASS 1 LASER PRODUCT
2. **DANGER:** Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
3. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the Unit; leave all servicing to qualified service personnel.

1. PRODUIT LASER CLASSE 1
2. **ATTENTION:** Radiation laser invisible quand l'appareil est ouvert ou que le verrouillage est en panne ou désactivé. Éviter une exposition directe au rayon.
3. **ATTENTION:** Ne pas ouvrir le couvercle du dessus. Il n'y a aucune pièce utilisable à l'intérieur. Laisser à un personnel qualifié le soin de réparer votre appareil.

Instructions for safe use
(Statement in accordance with the UL standards)

1) Read Instructions — Read carefully this instructions for your safe use before this appliance is installed, wire-connected, and operated.

2) Retain Instructions — For your future reference, retain this instruction.

3) Follow Instructions — Follow and obey all warnings, cautions and instructions marked on this appliance and this instruction.

4) Water and Moisture — Do not expose this appliance to rain, water and moisture, or operate it near water — for example near a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool, and the like.

5) Ventilation and Heat — This appliance should be situated so that its location does not interfere with its proper ventilation. For example, this appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings. This appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

6) Power sources — This appliance should be connected to a power supply only of the type as marked on this appliance.

7) Polarization — The precautions that should be taken so that the polarization means of this appliance is not defeated.

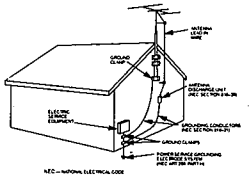
8) Power Cord Protection — Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

9) Cleaning — The appliance should be cleaned only as recommended by the manufacturer.

10) Power Lines — An outdoor antenna should be located away from power lines.

11) Outdoor Antenna Grounding — If this appliance is provided with means to connect the outdoor antenna and outside antenna is connected to this appliance, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. Example of antenna grounding is illustrated in here.

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
N.E.C. — NATIONAL ELECTRICAL CODE

12) Nonuse Periods — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

13) Object and Liquid Entry — Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

14) Damage Requiring Service — The appliance should be serviced by qualified service personnel when : (a) The power-supply cord or the plug has been damaged; or (b) Objects have fallen, or liquid has been spilled into the appliance; or (c) The appliance has been exposed to rain; or (d) The appliance does not appear to operate normally or exhibits a marked change in performance; or (e) The appliance has been dropped, or the enclosure damaged.

15) Servicing — The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Thank you for purchasing the JVC Compact Component System.
We hope it will be a valued addition to your home, giving you years of enjoyment.
Be sure to read this instruction manual carefully before operating your new stereo system.
In it you will find all the information you need to set up and use the system.
If you have any query that is not answered by the manual, please contact your dealer.

Features

Here are some of the things that make your System both powerful and simple to use.

- The controls and operations have been designed to make them very easy to use, freeing you to just enjoy the music.
  - With JVC's **COMPU PLAY** you can turn on the System and automatically start the Radio, Cassette deck or CD Player with a single touch.
- The System incorporates Active Hyper Bass PRO circuitry to faithfully reproduce low frequency sounds.
- Forty-five-station preset capability (30 FM and 15 AM) in addition to auto-seek and manual tuning.
- Versatile CD options include repeat, random and program play.
- Timer functions: Daily Timer, Recording Timer and Sleep Timer.
- Auto-reverse tape function.
- You can connect an audio equipment — used only as a playback device.

How This Manual Is Organized

- Basic information that is the same for many different functions – e.g. setting the volume – is given in the section "Common Operations," and not repeated under each function.
- The names of buttons/controls and display messages are written in all capital letters: e.g. TAPE, "NO DISC."

IMPORTANT PRECAUTIONS

Installation of the System
- Select a place which is level, dry and neither too hot nor too cold. (Between 5°C (41°F) and 35°C (95°F).)
- Leave sufficient distance between the System and a TV.
- Do not use the System in a place subject to vibrations.

Power cord
- Do not handle the power cord with wet hands!
- Some power is always consumed as long as the power cord is connected to the wall outlet.
- When unplugging the System from the wall outlet, always pull the plug, not the power cord.

Malfunctions, etc.
- There are no user serviceable parts inside. In case of a system failure, unplug the power cord and consult your dealer.
- Do not insert any metallic object into the System.

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English English

Getting Started

Accessories

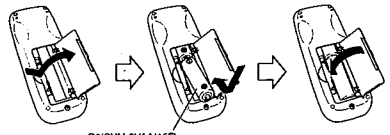
Make sure that you have all of the following items, which are supplied with the System.

AC Power Cord (1)
AM Loop Antenna (1)
Remote Control (1)
Batteries (2)
FM Wire Antenna (1)

If any of these items are missing, contact your dealer immediately.

How to Put Batteries in the Remote Control

Match the polarity (+ and –) on the batteries with the + and – markings in the battery compartment.



CAUTION: Handle batteries properly.
To avoid battery leakage or explosion:
- Remove batteries when the Remote Control will not be used for a long time.
- When you need to replace the batteries, replace both batteries at the same time with new ones.
- Do not use an old battery with a new one.
- Do not use different types of batteries together.

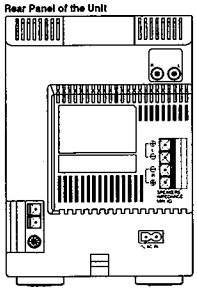
Using the Remote Control

The Remote Control makes it easy to use many of the functions of the System from a distance of up to 7 m (23 ft.) away.
You need to point the Remote Control at the remote sensor on the System's front panel.

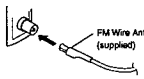
CAUTION: Make all connections before plugging the System into an AC power outlet.

Connecting the FM Antenna

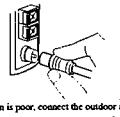
Rear Panel of the Unit



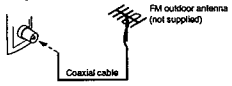
Using the supplied Wire Antenna



Using the coaxial type connector (not supplied)
A 75 Ω antenna with coaxial type connector (IEC or DIN 45325) should be connected to the FM (75 Ω) COAXIAL terminal.



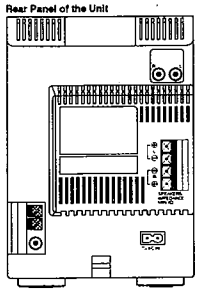
If reception is poor, connect the outdoor antenna.



Note: Before attaching a 75 Ω coaxial lead (the kind with a round wire going to an outdoor antenna), disconnect the supplied FM Wire Antenna.

Connecting the AM Antenna

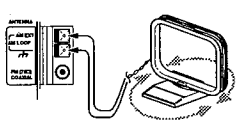
Rear Panel of the Unit



CAUTION:
To avoid noise, keep antennas away from the System, the connecting cord and the AC power cord.

AM Loop Antenna (supplied)

Attach the AM loop to its base by snapping the tabs on the loop into the slot in the base.



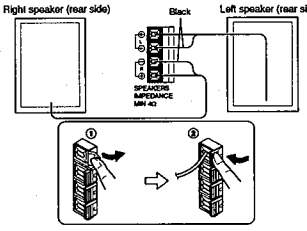
Turn the loop until you have the best reception.

English English

CAUTION: Make all connections before plugging the System into an AC power outlet.

Connecting the Speakers

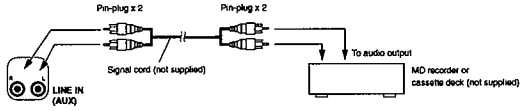
For each speaker, connect one end of the speaker wire to the speaker terminals on the back of the System.
1. Open each of the terminals and insert the speaker wires firmly, then close the terminals.
2. Connect the red (+) and black (–) wires of the right side speaker to the red (+) and black (–) terminals marked R on the System.
   Connect the red (+) and black (–) wires of the left side speaker to the red (+) and black (–) terminals marked L on the System.



CAUTION:
If a TV is installed near the speakers, the picture on the TV may be distorted. If this happens, set the speakers away from the TV.

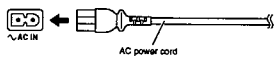
Connecting External Equipment

You can connect an audio equipment — used only as a playback device.
Connect the audio output terminals on the other equipment and the LINE IN (AUX) terminals on the rear, using an audio cord (not supplied).



Connecting the AC Power Cord

Firmly insert the supplied AC power cord into the AC inlet on the back of the Unit.



CAUTIONS:
- **ONLY USE JVC POWER CORD PROVIDED WITH THIS SYSTEM TO AVOID MALFUNCTION OR DAMAGE TO THE SYSTEM.**
- **BE SURE TO UNPLUG THE POWER CORD FROM THE OUTLET WHEN YOU ARE GOING OUT OR WHEN THE SYSTEM IS NOT IN USE FOR AN EXTENDED PERIOD OF TIME.**

Now you can plug the AC power cord into the wall outlet, and your System is at your command!

COMPU PLAY

The JVC's COMPU PLAY feature lets you control the most frequently used System functions with a single touch.
With One Touch Operation you can play a CD, a tape, turn on the radio, or listen to an external equipment at a single press of the play button for that function. One Touch Operation turns the power on for you, then starts the function you have specified.
How One Touch Operation works in each case is explained in the section dealing with that function.
The COMPU PLAY buttons are:

On the Unit
CD ▷/II button
FM/AM button
TAPE ◁ ▷ button
AUX button

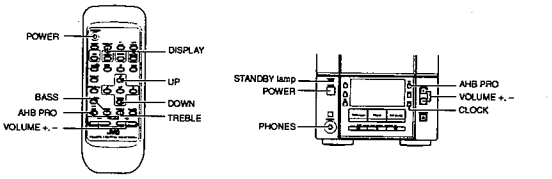
On the Remote Control
CD ▷/II button
FM/AM button
TAPE ◁ ▷ button
AUX button

AUTOMATIC POWER ON

The System automatically turns on with the following operation.
- When you press the CD OPEN/CLOSE ≙ button on the Unit (or CD ≙ button on the Remote Control), the System automatically turns on and the CD cover opens to allow CD insertion. However, this operation does not change the source to CD.
  When you press the POWER button to turn on or off the System, the CD cover will automatically close if it is open.

English

Common Operations



Turning the Power On and Off

Turning the System on

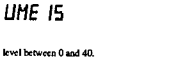
Press the POWER button.
The STANDBY lamp goes out.
The System comes on ready to play the source it was for when the power was last turned off.
- For example, if the last thing you were doing was listening to a CD, you are now ready to listen to a CD again. If you wish, you can change to another source.
- If you were listening to the Tuner last, the Tuner comes on playing the station it was last set to.

Turning the System off

Press the POWER button again.
The STANDBY lamp lights up.
- Some power is always consumed even though power is turned off (called Standby Mode).
- To switch off the System completely, unplug the AC power cord from the wall outlet. When you unplug the AC power cord, the clock will be reset to AM 12:00.

Adjusting the Volume

Press the VOLUME + button to increase the volume or press the VOLUME – button to decrease it.



You can adjust the volume level between 0 and 40.

CAUTION:
DO NOT turn off (on standby) the Unit with the volume set to an extremely high level; otherwise a sudden blast of sound could damage your hearing, speakers and/or headphones when you turn on the Unit or start playing any source next time.
REMEMBER you cannot adjust the volume level while the Unit is on standby.

For private listening
Connect a pair of headphones to the PHONES jack. No sound comes out of the speakers.
Be sure to turn down the volume before connecting or putting on headphones.

Reinforcing the Bass Sound (AHB PRO)

You can reinforce the bass sound to maintain rich, full bass at low volume (you can use this effect only for playback):
To get the effect, press the AHB (Active Hyper Bass) PRO button.
The BASS indicator lights up on the display.
To cancel the effect, press the button again.
The BASS indicator goes out.

Controlling the Tone (Bass/Treble)

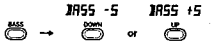
You can control the tone by changing the bass and treble.

Adjusting the bass level

You can adjust the bass level (low frequency range level) between –5 and +5. (0: Flat)

Press the BASS button on the Remote Control.

Press the UP or DOWN button on the Remote Control to adjust the bass level.



Adjusting the treble level

You can adjust the treble level (high frequency range level) between –5 and +5. (0: Flat)

Press the TREBLE button on the Remote Control.

Press the UP or DOWN button on the Remote Control to adjust the treble level.

Showing the Clock Time

In Standby mode, the digital clock appears on the display.

When the System is turned on, you can display the digital clock any time.

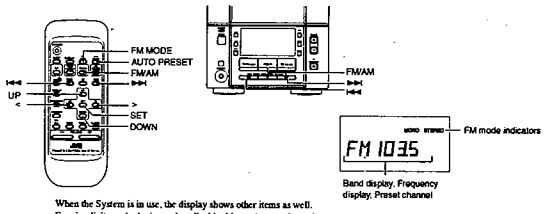
To display the digital clock, press the CLOCK button on the Unit or DISPLAY button on the Remote Control.

To return to the previous mode, press the same button again.

Note: To let the clock work, you need to set the clock beforehand. (See "Setting the Clock" on page 17.)

English

Using the Tuner



When the System is in use, the display shows other items as well.
For simplicity, only the items described in this section are shown here.

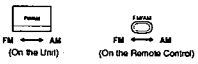
You can listen to FM and AM stations. Stations can be tuned in manually, automatically, or from preset memory storage.
- Before listening to the radio:
  - Make sure that both the FM and AM antennas are correctly connected. (See page 3.)

One touch radio

Just press the FM/AM button to turn on the System and start playing the station you were last tuned to.
- You can switch from any other sound source to the radio by pressing the FM/AM button.

Tuning in a Station

Press the FM/AM button.
The band and frequency you were last tuned to appear on the display.
(If the last station was selected using the preset number, the preset number appears first.)
Each time you press the button, the band alternates between FM and AM.



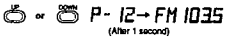
Select a station using one of the following methods.
- **Manual Tuning**
  Press the ⏮ or ⏭ button repeatedly to move from frequency to frequency until you find the station you want.

OR

- **Auto Tuning**
  If you press and hold the ⏮ or ⏭ button for one second or more, the frequency changes down, or up, automatically until a station is found.

OR

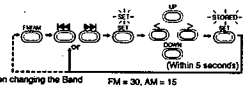
- **Preset Tuning using the Remote Control (Possible only after presetting stations)**
  Select the desired preset number using the UP, DOWN, > or < button on the Remote Control. After 1 second the display will show the preset number's band and frequency.
  Example: Press the UP button until the preset number 12 "P-12" appears.



Presetting Stations

You can preset up to 30 FM stations and up to 15 AM stations using the Remote Control.
Note: Preset numbers may have been set to factory test frequencies prior to shipment. This is not a malfunction. You can preset the stations you want into memory by following one of the presetting methods below.

Presetting stations manually



Select a band by pressing the FM/AM button.

Press the ⏮ or ⏭ button to tune in a station.

Press the SET button.
"SET" will flash for 5 seconds.
Within 5 seconds, proceed to the next step.
When the display returns to the one set in Step 2 after 5 seconds, press the SET button again.

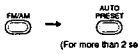
Press the UP, DOWN, > or < button within 5 seconds to select the preset number.
UP or > button: Increases the preset number by 1.
DOWN or < button: Decreases the preset number by 1.
- When the > or < button is held down, the preset number changes rapidly.

Press the SET button within 5 seconds.
"STORED" appears and after 2 seconds, the display returns to the broadcast frequency display.

Repeat above steps 1 to 5 for each station you want to store in memory with a preset number.
To change the preset stations, repeat the same steps as above.

Presetting stations automatically

In each band, you can automatically preset 30 FM and 15 AM stations. Preset numbers will be allocated as stations are found, starting from the lowest frequency and moving up the frequency.



(For more than 2 seconds)

Select a band by pressing the FM/AM button.

Press the AUTO PRESET button on the Remote Control for more than 2 seconds.

Repeat steps 1 – 2 for the other band.
- If you want to change the preset stations, carry out the Manual Presetting for the desired preset numbers.

CAUTION:
Even if the system is unplugged or if a power failure occurs, the preset stations will be stored for about 24 hours. However, in case the preset stations are erased, you will need to preset the stations again.

Changing the FM Reception Mode

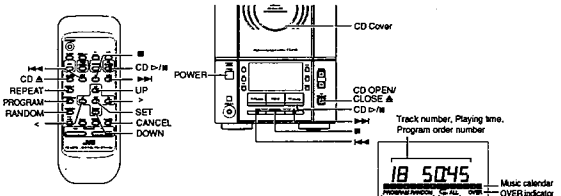
When you have tuned into an FM stereo broadcast, the STEREO indicator lights up and you can hear stereo effects.
If an FM stereo broadcast is hard to receive or noisy, you can select Monaural mode. Reception improves, but you lose any stereo effect.

Press the FM MODE button on the Remote Control so that the MONO indicator lights up on the display.

STEREO ⟷ MONO

To restore the stereo effect, press the FM MODE button on the Remote Control so that the MONO indicator goes off.

Using the CD Player



When the System is in use, the display shows other items as well. For simplicity, only the items described in this section are shown here.

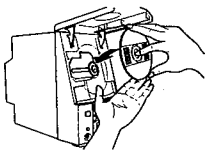
You can use Normal, Random, Program or Repeat Play. Repeat Play can repeat all the tracks or just one of the tracks on the CD. Here are the basic things you need to know to play a CD and locate the different tracks on it.

The quickest way to start a CD is with the one touch operation
- Press the CD ▷/II button on the Unit or the Remote Control.
- The power is automatically turned on. If a CD is already inserted, it will start playing from the first track.
- If no CD is inserted, "NO DISC" appears on the display and the CD Player remains in Stop mode.

Inserting a CD

Press the CD OPEN/CLOSE ⏏ button on the Unit (or the CD ⏏ button on the Remote Control).
The CD cover opens.

Place a CD, with its label side out as shown below. Press down on the portions around the CD's center hole until you hear a click.

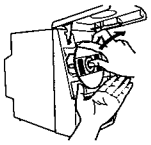


Press the CD OPEN/CLOSE ⏏ button on the Unit (or the CD ⏏ button on the Remote Control) again to close the CD cover.
- To close the CD cover and play the CD, you can just press the CD ▷/II button.
- You can place an 8 cm (3 in.) CD without an adaptor.
- When a CD with 16 tracks or more is loaded, the OVER indicator will light up on the display.
- If the CD cannot be read correctly (because it is scratched, for example), "00 0000" appears on the display.
- You can insert a CD while listening to another source.

CAUTIONS:
- **DO NOT try to open or close the CD cover by hand as it will be damaged.**
- **When you place or take out a CD, do not let it fall. Be careful not to scratch your fingers with the CD cover.**

Unloading a CD

Take out the CD as shown below.



Basics of Using the CD Player — Normal Play

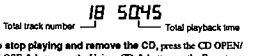
Playing a CD

Insert a CD.

Press the CD ▷/II button.
The first track of the CD begins playing.

- The track number that has already played disappears from the music calendar.
- The CD Player automatically stops when the last track of the CD has finished playing.

To stop playing the CD, press the ■ button.
The following information for the CD is displayed.



To stop playing and remove the CD, press the CD OPEN/CLOSE ⏏ button on the Unit or CD ⏏ button on the Remote Control to open the CD cover. Then remove the CD.
To pause, press the CD ▷/II button. The playback time flashes on the display.
To cancel pause, press the same button again. Play continues from the point where it was paused.

Selecting a track

During playback, press the ⏮ or ⏭ button (or the <, >, DOWN or UP button on the Remote Control) to select the track you want. The selected track starts playing.
- Press the ⏭ button (or the > or UP button on the Remote Control) once to skip to the beginning of the next track.
- Press the ⏮ button (or the < or DOWN button on the Remote Control) to skip to the beginning of the track being played. Press twice quickly to skip to the beginning of the previous track.
- When the > or < button on the Remote Control is held down, the tracks are successively skipped.

Selecting a passage within a track

Holding down the ⏮ or ⏭ button (or the DOWN or UP button on the Remote Control), during playback, will fast-forward/reverse the CD so you can quickly find a particular passage in the track you are listening to.

Programming the Playing Order of the Tracks

You can program the playing order of the tracks **using the Remote Control.**
- You can program up to 20 tracks in any desired order including the same tracks.
- You can only make a program when the CD Player is stopped.

Insert a CD.

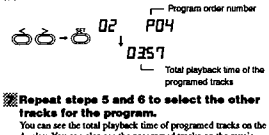
Press the CD ▷/II button.

Press the ■ button to stop the CD.

Press the PROGRAM button.
The System enters the programing mode and the PROGRAM indicator lights up.

Press the > or < button to select the track to program.
> button: Increases the track number by 1.
< button: Decreases the track number by 1.
- When the > or < button is held down, the track number changes rapidly.

Press the SET button.



Repeat steps 5 and 6 to select the other tracks for the program.
You can see the total playback time of programed tracks on the display. You can also see the programed tracks on the music calendar.

Press the CD ▷/II button.
The System plays the tracks in the order you have programed them.
- You can skip to a particular program track by pressing the ⏮ or ⏭ button (or the <, >, DOWN or UP button on the Remote Control) during Program Play.
- To stop playing, press the ■ button once.

To confirm the programed tracks while the CD player is stopped, press the PROGRAM button; the tracks making up the program will successively be displayed in the programed order.
To delete all the tracks in the program while the CD player is stopped, press the ■ button. Pressing the CD ⏏ button on the Remote Control (or the CD OPEN/CLOSE ⏏ button on the Unit) to open the CD cover will also clear the programed tracks.
To exit from the program mode while the CD player is stopped, press the ■ button to light off the PROGRAM indicator. All the programed tracks will be cleared.

Notes:
- If the total playback time of the programed tracks exceeds 99 minutes 59 seconds, "-- -- : -- --" appears on the display.
- If you try to program the 21st track, "FULL" appears on the display for about 2 seconds.

Modifying the program

Modify the contents of the program while the CD Player is stopped. Each time you press the CANCEL button, the last track in the program is deleted. To add new tracks to the end of the program, repeat above steps 5 to 7.

Playing at Random

The tracks will play in no particular order when you use this mode.

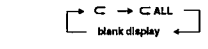
Press the RANDOM button on the Remote Control.
The RANDOM indicator lights up on the display, and tracks will be played in random order.

To skip a track during playback, press the ⏭ button (or the > or UP button on the Remote Control) to jump to the next randomly selected track. Press the ⏮ button (or the < or DOWN button on the Remote Control) to jump back to the start of a track being played.
To exit from Random Play mode, press the ■ button.

Repeating Tracks

You can set the program or individual track currently playing to repeat as many times as you like.

Press the REPEAT button on the Remote Control.
The Repeat indicator changes at each press of the button, as shown below.



⊂ : Repeats one track.
⊂ ALL : In Normal Play mode, repeats all the tracks.
In Program Play mode, repeats all the tracks in the program.
In Random Play mode, repeats all the tracks in random order.

To exit from Repeat mode, press the REPEAT button until the Repeat indicator on the display goes out.
- In Random Play ⊂ cannot be selected.
- Repeat mode remains in effect even when you change the play mode.

Locking the CD Cover

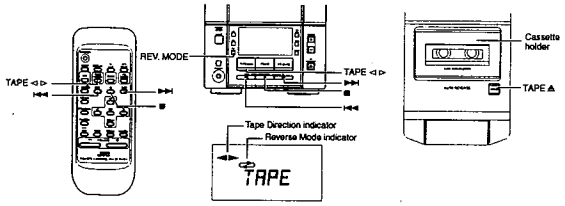
You can lock the CD cover and prohibit to unload the CD.
- This operation is possible only using the buttons on the unit.

To prohibit unloading the CD, press the POWER button while holding the ■ button. (If the CD cover is opened, close it first.)
"LOCKED" appears for a while, and the CD cover is locked.

To cancel the prohibition and unlock the CD cover, press the POWER button while holding the ■ button.
"UNLOCKED" appears for a while, and the CD cover is unlocked.

Note: If you try to unload the CD, "LOCKED" appears to inform you that the CD cover is locked.

Using the Cassette Deck (Listening to a Tape)



When the System is in use, the display shows other items as well.
For simplicity, only the items described in this section are shown here.

The Cassette Deck allows you to play and record audio tapes.
- With Automatic Tape Detection, you can listen to type I, II or IV tapes without having to change any settings.

The use of tapes longer than 120 minutes is not recommended, since characteristic deterioration may occur and these tapes easily jam in the pinch-rollers and the capstans.

One touch play

By pressing the TAPE ◁ ▷ button on the Unit or the Remote Control, the Unit will come on, "TAPE" appears on the display, and if a tape is in the deck, it will start to play. If no tape is loaded, the Unit will come on and wait for you to insert a tape, or select another function.

Standard Play

When the power is already on, you can use this basic procedure:

Press the TAPE ⏏ button on the Unit.

When the cassette holder opens, put the cassette in, with the side you want to listen to facing up.
- If the cassette holder does not open, turn the Unit off, then back on and press the TAPE ⏏ button again.

Close the holder gently until it clicks.

Press the TAPE ◁ ▷ button.
The tape is played in the direction shown by the Tape Direction indicator.

If you need to change the playback direction, press the TAPE ◁ ▷ button again.
The other Tape Direction indicator lights up and the tape playback direction changes.

To stop playing, press the ■ button.

To remove the tape, stop the tape, and press the TAPE ⏏ button on the Unit.

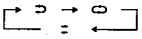
Fast-winding a tape

- Press the ▶▶I or I◀◀ button to fast-wind the tape.
  - The Cassette Deck automatically stops when the tape reaches its end.

Reverse Mode

You can set the cassette deck to play just one side of a tape, both sides once, or both sides continuously.

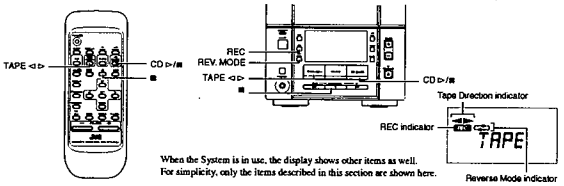
Press the REV. (reverse) MODE button on the Unit.
The indicator changes at each press of the button as shown.



⊃ : The Cassette Deck automatically stops after playing both sides of the tape. (Stops when playback in the ◀ direction is finished.)
⊂⊃ : The Cassette Deck continues to play both sides of the tape until the ■ button is pressed.
⇄ : The Cassette Deck automatically stops after playing one side of the tape.

English

Using the Cassette Deck (Recording)

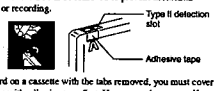


When the System is in use, the display shows other items as well.
For simplicity, only the items described in this section are shown here.

Recording onto a tape from any of the sound sources is simple. Just place a tape in the Cassette Deck, have the source ready, make one or two settings, and you're ready to record. For each source the procedure is a little bit different so we explain each separately. But first, here are a few things to make your recordings better.

Things to know before you start recording

- **It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable program and in any literary, dramatic, musical, or artistic embodied therein.**
- When you want to record onto both sides of a tape, you can set Reverse mode to do so. Recording automatically stops after recording in the ◀ direction. Therefore, make sure that the tape direction is ▶ when recording with Reverse mode on.
- The recording level, which is the volume at which the new tape is being made, is automatically set correctly, so it is not affected by the VOLUME control on the System. Nor is it affected by adjusting the sound effects. Thus, during recording you can adjust the sound you are actually listening to without affecting the recording level.
- Two small tabs on the back of the cassette tape, one for side A and one for side B, can be removed to prevent accidental erasure or recording.



- To record on a cassette with the tabs removed, you must cover the holes with adhesive tape first. However, when a type II tape is used, only cover part of the hole as shown, since the other part of the hole (Type II detection slot) is used to detect the tape type.
- Type I and Type II tapes can be used for recording.

Note: At the start and end of cassette tapes, there is leader tape which cannot be recorded onto. Thus, when recording CDs or radio broadcasts, wind on the leader tape first to ensure that the recording will be made without any music part lost.

CAUTION:
If a recording you make has excessive noise or static, the Unit may have been too close to a TV which was on during the recording. Either turn off the TV or increase the distance between the TV and the System.

Standard Recording

You can record any sound source to tape as follows:

Insert a blank or erasable tape into the Cassette Deck.

If you want to record on both sides of a tape, press the REV. MODE button on the Unit until the ⊃ indicator is lit.
- When using Reverse mode, insert the tape so that it will be recorded in the forward ▶ direction.

Check the recording direction for the tape.
Make sure that the Tape Direction indicator is the same as that for the tape in the Cassette Deck. If the directions are different, press the TAPE ◁ ▷ button to correct the tape direction and then press the ■ button to stop the tape.

Prepare the source by, for example, tuning in a radio station or turning on connected auxiliary equipment.

Note: For CD recording, refer to "CD Direct Recording" on page 15.

Press the REC button on the Unit.
The REC indicator lights up and the System begins recording.

Notes for using Reverse mode for recording
When recording in Reverse mode, the System automatically stops when it reaches the end of the reverse ◀ direction. To record on both sides of a tape, make sure that the recording direction for the tape inserted is forwards ▶, and that the Tape Direction indicator is also forwards ▶, before you start recording.

To stop at any time during the recording process
Press the ■ button.

CD Direct Recording

Everything on the CD goes onto the tape in the order it is on the CD, or according to the order you have set in a program.

Insert a blank or erasable tape into the Cassette Deck.

Insert a CD.

Press the CD ▷/II button.

Press the ■ button.
- If you want to record specific tracks only, program the tracks beforehand. You can check their total playback time on the display during programing. (See page 11.)

If you want to record on both sides of a tape, press the REV. MODE button on the Unit until the ⊃ indicator is lit.
- Make sure that the recording direction for the tape and the Tape Direction indicator are correct. (See "Notes for using Reverse mode for recording" on page 14.)

Select whether to have pauses left between recorded selections.
- If nothing is done, a non-recorded pause of about four seconds will be automatically left between selections.
- If you do not want pauses left between selections, do the following before proceeding to the next step.
  Press the CD ▷/II button twice.
  The CD player enters Pause mode.

Press the REC button on the Unit.
The REC indicator lights up and the System begins recording.
- When recording a CD onto tape with Reverse mode on:
  If a song is recorded for more than 12 seconds (which corresponds to the length of leader tape) but not finished before the first side of tape comes to an end, this song will automatically be recorded on the second side from its beginning to avoid being split on both sides.
  If a song is recorded for less than 12 seconds before the first side of tape comes to an end, the song preceding this song will also be recorded on the second side from its beginning as it may not be completely recorded on the first side because of leader tape.
- After the CD player has played the entire CD, or all the programed tracks, the tape automatically stops.

To stop at any time during the recording process, press the ■ button. The tape stops after 4 seconds.

Note: When making SLEEP timer settings while doing CD Direct recording, set enough time to allow for the CD to finish playing, otherwise the power will go off before recording is completed.

One track recording

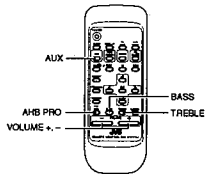
Insert a blank or erasable tape into the Cassette Deck.

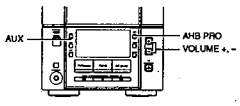
Play the track on the CD you wish to record.

Press the REC button on the Unit.
The CD player returns to the beginning of that track and the track is recorded on the tape. After recording, the CD player and Cassette Deck automatically stop.

English

Using External Equipment





Listening to External Equipment

You can connect an audio equipment — used only as a playback device.
- First make sure that the external equipment is properly connected to the System. (See page 4.)

Set the VOLUME control to the minimum position.

Press the AUX button.
"AUX" appears on the display.

AUX

Start playing the external equipment.

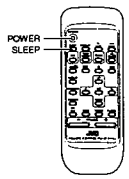
Adjust the VOLUME control to the desired listening level.

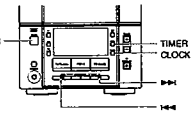
Apply sound effects, if you wish.
- Press the AHB PRO button to reinforce the bass sound.
- Press the BASS/TREBLE button on the Remote Control to control the tone. (See "Controlling the Tone (Bass/Treble)" on page 7.)

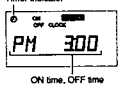
To exit from AUX mode, select another source.

Notes:
- For operation of the external equipment, refer to its Instructions.
- For recording from the external equipment, refer to "Standard Recording" on page 14.

Using the Timers







When the System is in use, the display shows other items as well.
For simplicity, only the items described in this section are shown here.

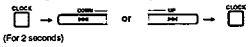
The timers let you control listening and recording functions automatically.

Setting the Clock

- When you plug the AC power cord into the wall outlet, the CLOCK indicator flashes on the display.

You can set the clock whether the System is on or off.

Notes:
- The clock must be correctly set for the timers to work.
- The procedure must be completed within 2 minutes. Otherwise, the setting is cleared and must be repeated from the beginning.



(For 2 seconds)

Press the CLOCK button on the Unit for more than 2 seconds.
The hour digits rapidly flash on the display.

Press the ▶▶| or |◀◀ button to set the hour.
Pressing the ▶▶| button moves the hour forwards and pressing the |◀◀ button moves it backwards. Hold down the button to move the hour rapidly.

Press the CLOCK button.
The minute digits rapidly flash on the display.

Press the ▶▶| or |◀◀ button to set the minute.
Pressing the ▶▶| button moves the minute forwards and pressing the |◀◀ button moves it backwards. Hold down the button to move the minute rapidly.

Press the CLOCK button again.
The selected time is set and the seconds start counting from 0. The CLOCK indicator remains lit on the display.

CAUTION:
If the System is unplugged, or a power failure occurs, the timer setting will be lost. You will need to reset the clock first, then the timer.

Note: The clock may gain or lose 1 to 2 minutes per month.

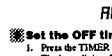
Setting the Daily Timer

Once you have set the Daily Timer, the timer will be activated at the same time every day. It can be canceled and re-activated whenever you wish.
The Timer indicator on the display shows when the Daily Timer you have set will be activated.

Notes:
- Finish each step within 30 seconds. Otherwise, the setting is cleared and the procedure must be repeated from the beginning.
- The clock must be correctly set for the timers to work. If the clock has not been set, the CLOCK indicator will flash on the display when you press the TIMER button for more than 2 seconds, and then the display alternates between "ADJUST" and "CLOCK" for about 5 seconds.

Press the TIMER button on the Unit for more than 2 seconds.
The ON indicator lights up, and then the current ON time flashes on the display. (Example: AM 11:00)

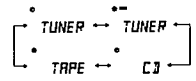
Set the ON time. (Example: AM 11:15)
Press the ▶▶| or |◀◀ button on the Unit to set the hour you want the Unit to come on.
Pressing the ▶▶| button moves the hour forwards and pressing the |◀◀ button moves it backwards. Hold down the button to move the hour rapidly. Press the TIMER button to adjust the minute.



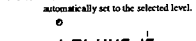
Set the OFF time. (Example: AM 12:15)
1. Press the TIMER button on the Unit
   The hour digits of the current OFF time flashes, and then the OFF indicator lights up on the display.

2. Press the ▶▶| or |◀◀ button on the Unit to set the time you want the Unit to be turned off.
   Pressing the ▶▶| button moves the hour forwards and pressing the |◀◀ button moves it backwards. Hold down the button to move the hour rapidly. Press the TIMER button again to adjust the minute.

Select the music source.
1. Press the TIMER button on the Unit.
   "TUNER" flashes on the display.
2. Press the ▶▶| or |◀◀ button to select the music source you want to listen to.
   The display changes as shown below.



Set the volume level.
1. Press the TIMER button on the Unit.
   The current volume setting flashes on the display.
2. Press the ▶▶| or |◀◀ button to select the volume level.
   -- : The current volume level will be used.
   0 to 40 : When the timer is turned on, the volume will be automatically set to the selected level.



Press the TIMER button on the Unit.
The timer setting is completed and the display returns to the indications before you set the timer. The Timer indicator remains lit.

Before turning off the System, prepare the music source selected in step 4.
TUNER: Tune in to the desired station.
REC TUNER: See "Setting the Recording Timer."
CD: Insert a CD.
TAPE: Insert a tape.

Press the POWER button to turn off the System.

To cancel the timer, press the TIMER button for more than 2 seconds. The Timer indicator goes out on the display.
To re-activate the canceled timer, press the TIMER button for more than 2 seconds to light the Timer indicator. Then, press the TIMER button until the display returns to the previous indications. The Timer indicator should remain lit.
To confirm the timer settings, cancel the timer once by pressing the TIMER button, and press the button again for more than 2 seconds. Then, press the TIMER button repeatedly, to see the current timer settings (ON time, OFF time, source, and volume). Press the TIMER button to set the timer again.
To change the timer setting, repeat the setting procedure from the beginning.
- When the timer turns on, the Timer indicator starts flashing.

Note: If the Unit is turned on when the timer-on time comes, Daily Timer does not work.

CAUTION:
If the System is unplugged, or a power failure occurs, the timer will be canceled. You will need to reset the clock first, then the timer.

Setting the Recording Timer

With the Recording Timer, you can make a tape of radio broadcast automatically.

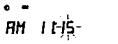
How Recording Timer actually works
The Unit automatically turns on, tunes into the last received station, and starts recording when the on-time comes. Then, when the off-time comes, the Unit automatically turns off (stands by).
The timer setting remains in memory until you change it.

Notes:
- Finish each step within 30 seconds. Otherwise, the setting is cleared and the procedure must be repeated from the beginning.
- The clock must be correctly set for the timers to work. If the clock has not been set, the CLOCK indicator will flash on the display when you press the TIMER button for more than 2 seconds, and then the display alternates between "ADJUST" and "CLOCK" for about 5 seconds.

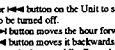
Press the POWER button to turn on the System.

Tune in to the desired station.
See page 8.

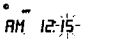
Press the TIMER button on the Unit for more than 2 seconds.
The ON indicator lights up, and then the current ON time flashes on the display. (Example: AM 11:00)



Set the ON time. (Example: AM 11:15)
Press the ▶▶| or |◀◀ button on the Unit to set the hour you want the Unit to come on.
Pressing the ▶▶| button moves the hour forwards and pressing the |◀◀ button moves it backwards. Hold down the button to move the hour rapidly. Press the TIMER button to adjust the minute.



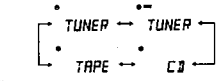
Set the OFF time. (Example: AM 12:15)
1. Press the TIMER button on the Unit.
   The hour digits of the current OFF time flashes, and then the OFF indicator lights up on the display.



2. Press the ▶▶| or |◀◀ button on the Unit to set the time you want the Unit to be turned off.
   Pressing the ▶▶| button moves the hour forwards and pressing the |◀◀ button moves it backwards. Hold down the button to move the hour rapidly. Press the TIMER button again to adjust the minute.

Press the TIMER button on the Unit.

Press the ▶▶| or |◀◀ button until "TUNER" appears and the REC indicator lights up on the display.
The display changes as shown below.



Set the volume level.
1. Press the TIMER button on the Unit.
   The current volume setting flashes on the display.
2. Press the ▶▶| or |◀◀ button to select the volume level.
   -- : The current volume level will be used.
   0 to 40 : When the timer is turned on, the volume will be automatically set to the selected level.

To turn off the volume while the Recording Timer is working, set the volume level to "0."

Press the TIMER button on the Unit.
The timer setting is completed and the display returns to the indications before you set the timer. The Timer indicator remains lit.
Note: If you change the station before turning off the System, the last received station will be recorded.

Insert a blank or erasable tape into the Cassette Deck.
- Make sure that the tape has the enough length for recording.

Press the POWER button to turn off the System.

To cancel the timer, press the TIMER button for more than 2 seconds. The REC and Timer indicators go out on the display.
To re-activate the canceled timer, press the TIMER button for more than 2 seconds to light the REC and Timer indicators.
To confirm the timer settings, cancel the timer once by pressing the TIMER button, and press the button again for more than 2 seconds. Then, press the TIMER button repeatedly, to see the current timer settings (ON time, OFF time, source, and volume). Press the TIMER button to set the timer again.
To change the timer setting, repeat the setting procedure from the beginning.
- When the timer turns on, the Timer indicator starts flashing.

Note: If the Unit is turned on when the timer-on time comes, Recording Timer does not work.

CAUTION:
If the System is unplugged, or a power failure occurs, the timer will be canceled. You will need to reset the clock first, then the timer.

Setting the Sleep Timer

When a source is playing, use the Sleep Timer to turn the System off after a certain number of minutes. By setting the Sleep Timer, you can fall asleep to music and know that your System will turn off by itself rather than play all night.
■ You can only set the Sleep Timer when the System is on.

Note: The clock must be correctly set for the timers to work. If the clock has not been set, the CLOCK indicator will flash on the display when you press the TIMER button for more than 2 seconds, and then the display alternates between "ADJUST" and "CLOCK" for about 5 seconds.

Play a CD or a cassette tape, or tune in to the desired station.

Press the SLEEP button on the Remote Control.
The SLEEP indicator lights up.

Set the length of time you want the source to play before shutting off.
- Each time you press the SLEEP button, it changes the number of minutes shown on the display in this sequence:

After setting the number of minutes for the Sleep Timer, the display will stop flashing and return to the previous state.
The System is now set to turn off after the number of minutes you set.

To confirm the Sleep Time
When the SLEEP button is pressed, the remaining sleep time is displayed.
To cancel the Sleep Timer setting
Press the SLEEP button until the SLEEP indicator goes out on the display.
Turning off the System also cancels the Sleep Timer.

Care and Maintenance

Handle your CDs carefully, and they will last a long time.

Compact Discs

- Only CDs bearing this mark can be used with this System. However, continued use of irregular shape CDs (heart-shape, octagonal, etc.) can damage the System.

- Remove the CD from its case by holding it at the edges while pressing the case's center hole lightly.
- Do not touch the shiny surface of the CD, or bend the CD.

- Put the CD back in its case after use to prevent warping.
- Be careful not to scratch the surface of the CD when placing it back in the case.
- Avoid exposure to direct sunlight, temperature extremes, and moisture.

- A dirty CD may not play correctly. If a CD does become dirty, wipe it with a soft cloth in a straight line from center to edge.

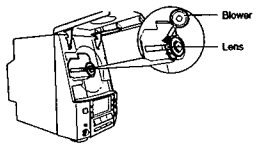
CAUTION: Do not use any solvent (for example, conventional record cleaner, spray thinner, benzine, etc.) to clean a CD.

General Notes

In general, you will have the best performance by keeping your CDs and the mechanism clean.
- Store CDs in their cases, and keep them in cabinets or on shelves.
- Keep the system's CD cover closed when not in use.

Cleaning the Lens

If the lens in the CD pickup is dirty, sound degradation may take place.
Open the CD cover and clean the lens as shown.
- Use a blower (available from a camera store) to blow dust off the lens.



- If there are fingerprints, etc. on the lens, gently wipe clean with a cotton swab.

Moisture Condensation

Moisture may condense on the lens inside the System in the following cases:
- After turning on heating in the room
- In a damp room
- If the System is brought directly from a cold to a warm place

Should this occur, the System may malfunction. In this case, leave the System turned on for a few hours until the moisture evaporates, unplug the AC power cord, and then plug it in again.

Cassette Tapes

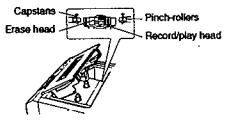
- If the tape is loose, it may get stretched, cut, or caught in the cassette. Take up the slack by inserting a pencil in one of the reels and rotating.

- Do not touch the tape surface.

- Do not store the tape:
  - In dusty places
  - In direct sunlight or heat
  - In moist areas
  - On a TV or speaker
  - Near a magnet

Cassette Deck

- If the heads, capstans, or pinch-rollers of the Cassette Deck become dirty, the following may occur:
  - Loss of sound quality
  - Discontinuous sound
  - Fading
  - Incomplete erasure
  - Difficulty in recording
- Clean the heads, capstans, and pinch-rollers using a cotton swab moistened with alcohol.



- If the heads become magnetized, the Unit will produce noise or lose high frequency notes.
- To demagnetize the heads, turn off the Unit, and use a head demagnetizer (available at electronics and record shops).

Troubleshooting

- If you are having a problem with your System, check this list for a possible solution before calling for service.
- If you cannot solve the problem from the hints given here, or the System has been physically damaged, call a qualified person, such as your dealer, for service.

Symptom	Possible Cause	Action
No sound is heard.	• Connections are incorrect, or loose. • Headphones are connected.	• Check all connections and make corrections. (See pages 2 - 5.) • Disconnect the headphones.
Poor radio reception	• Antennas are disconnected. • The AM Loop Antenna is too close to the System. • The FM Wire Antenna is not properly extended and positioned.	• Reconnect the antenna securely. • Change the position and direction of the AM Loop Antenna. • Extend FM Wire Antenna to the best reception position.
The CD does not play.	The CD is upside down.	Put the CD in with the label side up.
The CD skips.	The CD is dirty or scratched.	Clean or replace the CD.
The CD cover does not open or close.	The AC power cord is not plugged in.	Plug the AC power cord.
The cassette holder cannot be opened.	During tape playing, the power cord was unplugged.	Plug in the power cord, press the POWER button, and then press the TAPE ⏏ button.
Unable to record.	Cassette record protect tabs are removed.	Cover the holes on the back edge of the cassette with adhesive tape.
Operations are disabled.	The built-in microprocessor has malfunctioned due to external electrical interference.	Unplug the System then plug it back in.
Unable to operate the Remote Control.	• The path between the Remote Control and the sensor on the Unit is blocked. • The batteries have lost their charge.	• Remove the obstruction. • Replace the batteries.

English

English

Specifications

FS-V10 (CA-FSV10 and SP-UXV10)

Amplifier

Output Power
25 W per channel, min. RMS, at 4 Ω from 80 Hz to 15 kHz, with no more than 10% total harmonic distortion (for U.S.A.)
44 W (22 W + 22 W) at 4 Ω (Max.) (for Canada)

Input Sensitivity/Impedance (1 kHz)
LINE IN (AUX): 400 mV/48 kΩ
Speaker terminals: 4 Ω - 16 Ω
Phones: 16 Ω - 1 kΩ
0 mW - 15 mW per channel output into 32 Ω

Cassette Deck

Frequency Response
Type I (Normal): 50 Hz - 14 kHz
Type II (CrO_2): 50 Hz - 15 kHz
Wow and Flutter: 0.15% (WRMS)

CD Player

Signal-To-Noise Ratio: 90 dB
Wow And Flutter: Immeasurable

Tuner

FM Tuner
Tuning Range: 87.5 MHz - 108.0 MHz
AM Tuner
Tuning Range: 530 kHz - 1,710 kHz

Speaker Specifications

(each unit)
Speakers: 8 cm cone x 1
Impedance: 4 Ω
Dimensions: 140 mm x 230 mm x 211 mm (W/H/D)
(5 5/16 in. x 9 1/16 in. x 8 5/16 in.)
Mass: Approx. 1.8 kg (4.0 lbs)

General

Dimensions: 438 mm x 234 mm x 279 mm (W/H/D)
(17 1/4 in. x 9 1/32 in. x 10 31/32 in.)
Mass: Approx. 6.8 kg (15.0 lbs)

Power Specifications

Power Requirements: AC 120 V ~, 60 Hz
Power Consumption: 50 W (power on mode)
3.7 W (in Standby mode)

Accessories

See page 2.

Design and specifications are subject to change without notice.

QUALITY JVC SERVICE

HOW TO LOCATE YOUR JVC SERVICE CENTER

TOLL FREE : 1-800-537-5722
http://www.jvcservice.com

Dear customer:
In order to receive the most satisfaction from your purchase, read the instruction booklet before operating the unit. In the event that repair is necessary, or for the address nearest your location, please refer to the factory service center list below or within the Continental United States, Call 1-800-537-5722 for your authorized servicer. Remember to retain your Bill of Sale for Warranty Service.

—JVC

JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.

FACTORY SERVICE CENTER LOCATIONS

10 New Maple Avenue
Pine Brook, NJ 07058-9641
(973) 396-1000

1500 Lakes Parkway
Lawrenceville, GA 30243-5857
(770) 339-2582

705 Enterprise Street
Aurora, IL 60504-8149
(630) 851-7855

5665 Corporate Avenue
Cypress, CA 90630-0024
(714) 229-8011

2969 Mapunapuna Place
Honolulu, HI 96819-2040
(808) 833-5828

10700 Hammerly, Suite 110
Houston, TX 77043
(713) 935-9331

13 Cummings Park
Woburn, MA 01801
(781) 376-9100

8192 State Road 84
Davie, FL 33324
(954) 472-1960

890 Dubuque Avenue
South San Francisco, CA 94080-1804
(650) 871-2666

Sophisticated electronic products may require occasional service. Just as quality is a keyword in the engineering and production of the wide array of JVC products, service is the key to maintaining the high level of performance for which JVC is world famous. The JVC service and engineering organization stands behind our products.

NATIONAL HEADQUARTERS
JVC SERVICE & ENGINEERING COMPANY OF AMERICA
DIVISION OF JVC AMERICAS CORP.
1700 Valley Road
Wayne, NJ 07470

If you ship the product • • •

Pack your JVC unit in the original carton or one of equivalent size and strength. Enclose, with the unit, a letter stating the problem or symptom that exists and also a copy of the receipt or bill of sale you received when you purchased your JVC unit. Print your home return address on the outside and the inside of the carton. Send to the appropriate JVC Factory Service Center as listed above.

Don't service it yourself.

CAUTION

To prevent electrical shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified service personnel.

ACCESSORIES

To purchase accessories for your JVC product, you may contact your local JVC Dealer. Or from the 48 Continental United States call toll free : 800-882-2345

(1099)

JVC LIMITED WARRANTY AUDIO-1

JVC COMPANY OF AMERICA warrants this product and all parts thereof, except as set forth below ONLY TO THE ORIGINAL PURCHASER AT RETAIL to be FREE FROM DEFECTIVE MATERIAL AND WORKMANSHIP from the date of original retail purchase for the period as shown below. ("The Warranty Period.")

PARTS	LABOR
1YR	1YR

THIS LIMITED WARRANTY IS VALID ONLY IN THE FIFTY(50) UNITED STATES, THE DISTRICT OF COLUMBIA AND IN COMMONWEALTH OF PUERTO RICO.

WHAT WE WILL DO:
If this product is found to be defective, JVC will repair or replace defective parts at no charge to the original owner. Such repair and replacement services shall be rendered by JVC during normal business hours at JVC authorized service centers.
Parts used for replacement are warranted only for the remainder of the Warranty Period. All products and parts thereof may be brought to a JVC authorized service center on a carry-in basis except for Television sets having a screen size 25 inches and above which are covered on an in-home basis.

WHAT YOU MUST DO FOR WARRANTY SERVICE:
Return your product to a JVC authorized service center with a copy of your bill of sale. For your nearest JVC authorized service center, please call toll free: (800)537-5722.
If service is not available locally, box the product carefully, preferably in the original carton, and ship, insured, with a copy of your bill of sale plus and letter of explanation of the problem to the nearest JVC Factory Service Center, the name and location of which will be given to you by the toll-free number.
If you have any questions concerning your JVC Product, please contact our Customer Relations Department.

WHAT IS NOT COVERED:
This limited warranty provided by JVC does not cover:
1. Products which have been subject to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, or if repaired or serviced by anyone other than a service facility authorized by JVC to render such service, or if affixed to any attachment not provided with the products, or if the model or serial number has been altered, tampered with, defaced or removed;
2. Initial installation and installation and removal for repair;
3. Operational adjustments covered in the Owner's Manual, normal maintenance, video and audio head cleaning;
4. Damage that occurs in shipment, due to act of God, and cosmetic damage;
5. Signal reception problems and failures due to line power surge;
6. Video Pick-up Tubes/CCD Image Sensor, Cartridge, Stylus(Needle) are covered for 90 days from the date of purchase;
7. Accessories;
8. Batteries (except the Rechargeable Batteries are covered for 90 days from the date of purchase);

There are no express warranties except as listed above.

THE DURATION OF ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY, IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY HEREIN.

JVC SHALL NOT BE LIABLE FOR THE LOSS OF USE OF THE PRODUCT, INCONVENIENCE, LOSS OR ANY OTHER DAMAGES, WHETHER DIRECT, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, WITHOUT LIMITATION, DAMAGE TO TAPES, RECORDS OR DISCS) RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED TO THE WARRANTY PERIOD SET FORTH ABOVE.

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For customer use:

Enter below the Model No. and Serial No. which is located either on the rear, bottom or side of the cabinet. Retain this information for future reference.

Model No.: Serial No.:

Purchase date: Name of dealer:

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VICTOR COMPANY OF JAPAN, LIMITED

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Disassembly method

<Main body>

■ Removing the rear cover

(See Fig.1 and 2)

1. Remove the eight screws A attaching the rear cover on the back of the body.
2. Remove the two screws B attaching the rear cover on the bottom of the body.
3. Unlock the speaker terminal and the antenna terminal, then remove the rear cover backward with releasing the hooks.

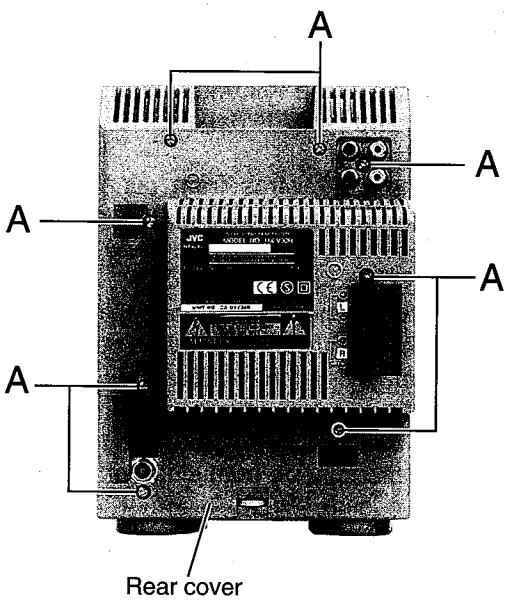


Fig.1

■ Removing the side panels

(See Fig.3 and 4)

- Prior to performing the following procedure, remove the rear cover.

1. Move the side panels in the direction of the arrow and remove them backward.

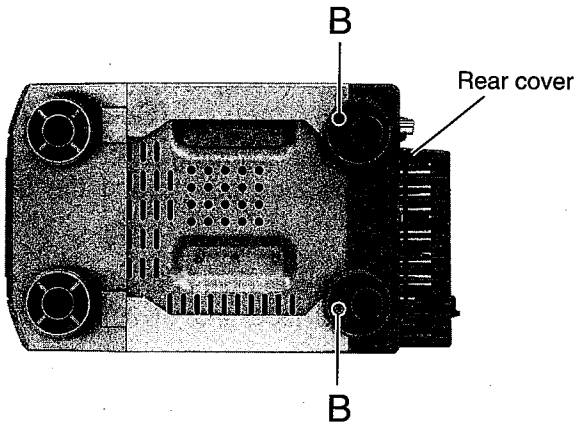


Fig.2

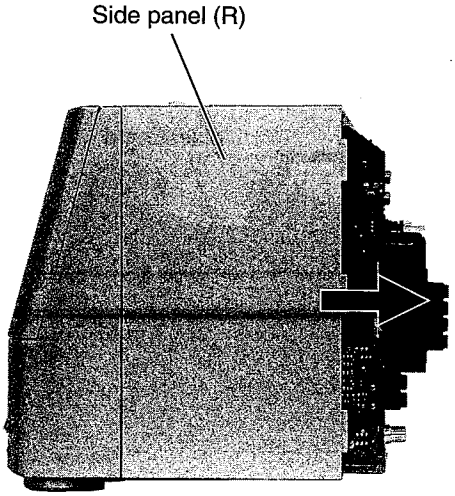


Fig.4

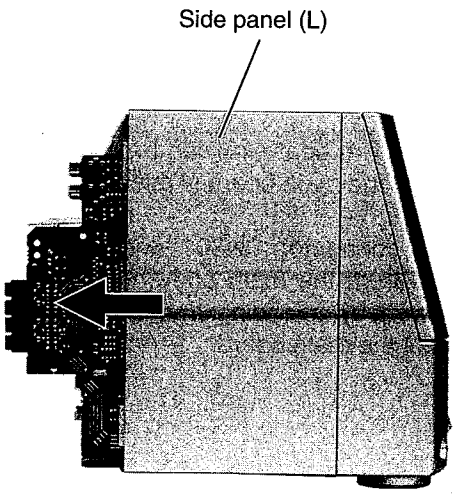


Fig.3

■Removing the cassette mechanism assembly (See Fig.5 and 6)

- Prior to performing the following procedure, remove the rear cover and the side panels.

1. Disconnect the card wires from connector CN304 and CN305 on the main board on the left side of the body.

2. Disconnect the harness from connector CN309 on the Opt, Dig.out board on the right side of the body. Cut off the band fixing the harness.

3. Remove the two screws C attaching the cassette mechanism assembly on both sides of the body and release the two joints a.

4. Remove the cassette mechanism assembly in the direction of the arrow.

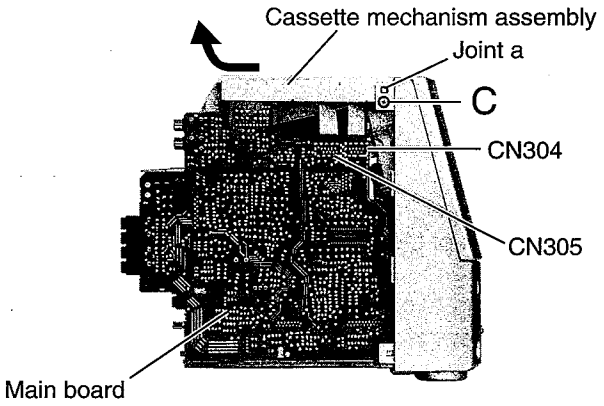


Fig.5

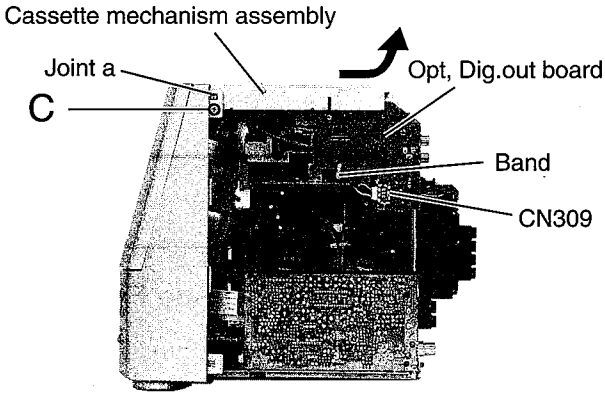


Fig.6

■Removing the main board / the heat sink (See Fig.7 to 9)

- Prior to performing the following procedure, remove the rear cover, the side panels and the cassette mechanism assembly.

1. Disconnect the card wire from connector CN303 and the harness from CN306 and CN307 on the main board respectively.

2. Disconnect the harness from connector CN902 on the power transformer.

3. Remove the screw E attaching the main board on the right side of the body.

4. Remove the screw F and the two screws G attaching the heat sink on the back of the body.

   ATTENTION: The heat sink can be removed even if the main board is attached to the body.

5. Disconnect connector CN301 and CN302 on the main board from the main body. Remove the main board upward by releasing the two joints b in the lower part of the main board.

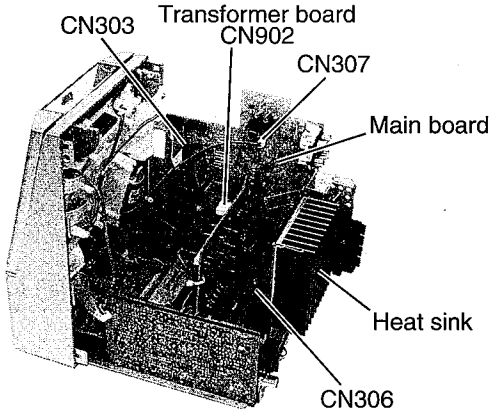


Fig.7

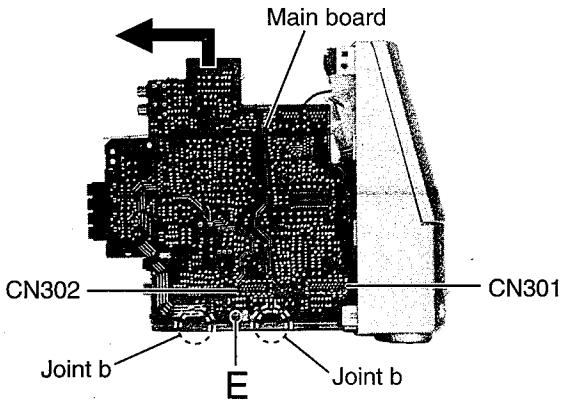


Fig.8

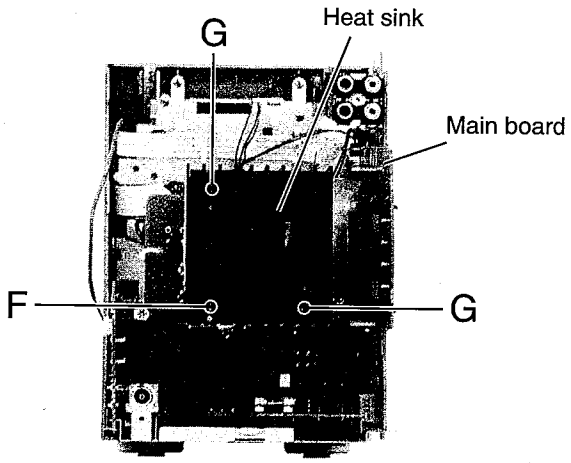


Fig.9

■ Removing the front panel assembly (See Fig.10 to 12)

- Prior to performing the following procedure, remove the rear cover, the side panels, the cassette mechanism assembly and the main board.

1. Disconnect the card wire from connector CN732 on the LCD board.
2. Remove the two screws D attaching the front panel assembly on the bottom of the body.
3. Release the two joints c on the lower right and left sides of the body. Pull out the front panel assembly toward the front.

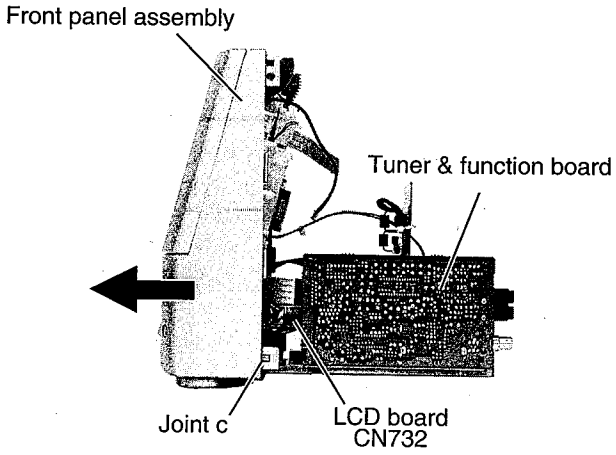


Fig.10

■ Removing the head phone board (See Fig.13)

- Prior to performing the following procedure, remove the rear cover, the side panels, the cassette mechanism assembly, the main board and the front panel assembly.

1. Remove the plastic rivet attaching the head phone board and release the joint d.

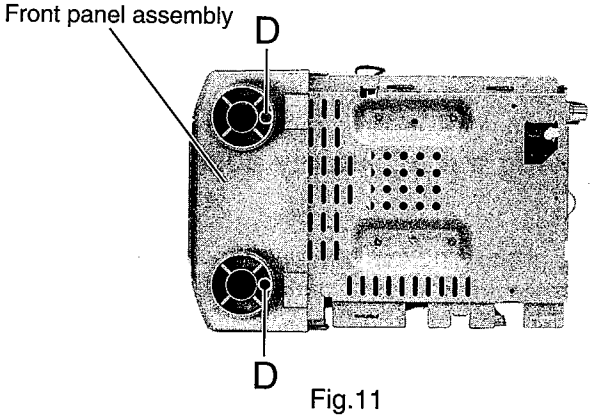


Fig.11

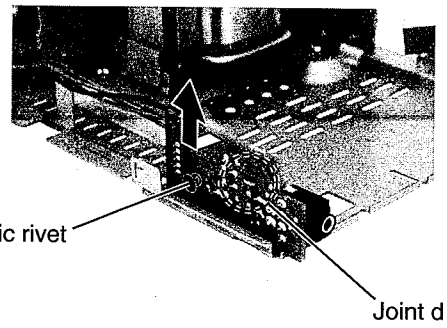


Fig.13

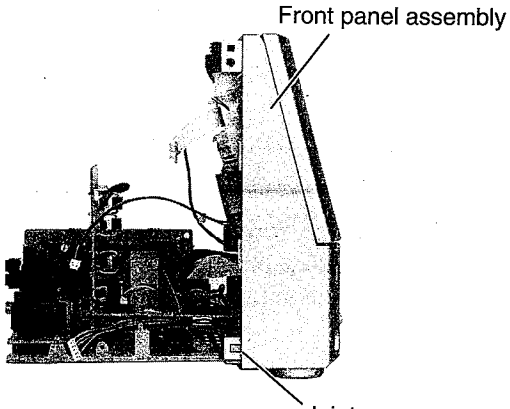


Fig.12

■ Removing the tuner & function board (See Fig.14)

- Prior to performing the following procedure, remove the rear cover, the side panels and the cassette mechanism assembly.

1. Disconnect the card wire from connector CN1 on the tuner & function board.
2. Remove the screw H attaching the tuner & function board.
3. Release the two joints e and the joint f of the tuner & function board.

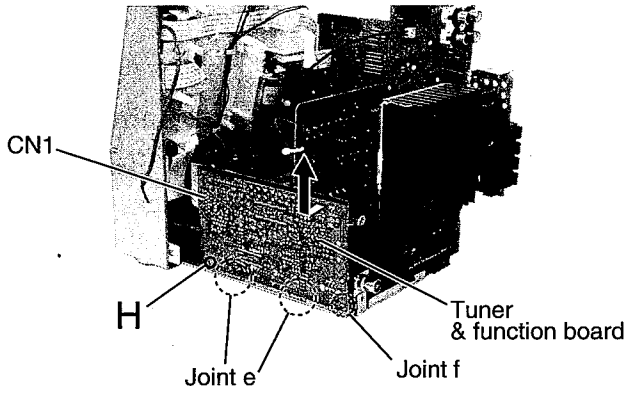


Fig.14

■ Removing the power transformer (See Fig.15)

- Prior to performing the following procedure, remove the rear cover, the side panels and the cassette mechanism assembly.

1. Disconnect the harness from connector CN902 on the power transformer.
2. Disconnect the harness from connector CN901 on the AC supply board.
3. Remove the four screws I attaching the power transformer.

■ Removing the AC supply board (See Fig.15)

- *Prior to performing the following procedure, remove the rear cover, the side panels and the cassette mechanism assembly.

1. Disconnect the harness from connector CN901 on the AC supply board.
2. Remove the screw F attaching the heat sink on the back of the body (Refer to Fig.9).
3. Remove the two screws J attaching the AC supply board.

ATTENTION: To remove the AC supply board efficiently, remove the main board in advance.

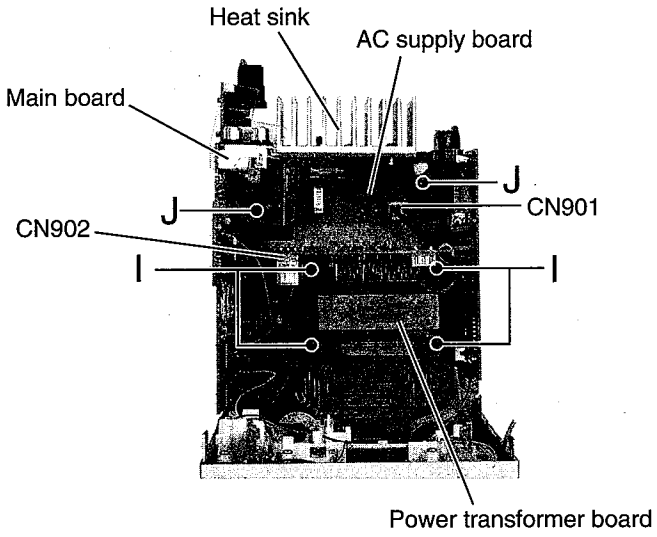


Fig.15

<Cassette mechanism assembly>

- Prior to performing the following procedure, remove the rear cover, the side panels and the cassette mechanism assembly.

■ Removing the Opt.Dig.out board (See Fig.16)

1. Remove the two screws K attaching the Opt.Dig.out board on the side of the cassette mechanism assembly.

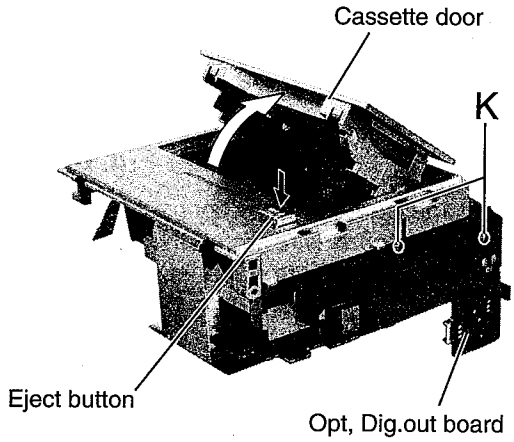


Fig.16

■Removing the cassette mechanism assembly (See Fig.16 and 17)

- Prior to performing the following procedure, remove the Opt.Dig.out board.

1. Press the eject button on the front side of the cassette mechanism assembly to open the cassette door.

2. Remove the four screws L attaching the cassette mechanism assembly on the back of the assembly.

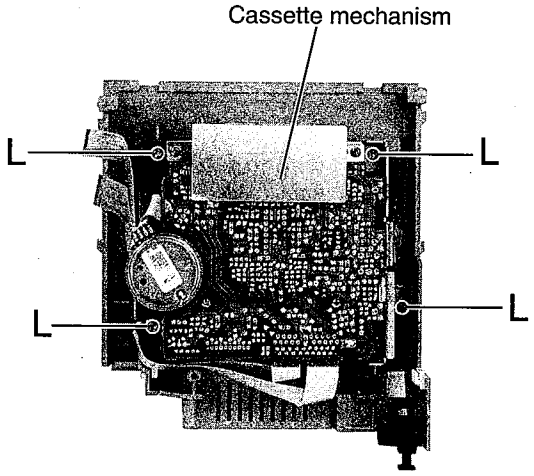


Fig.17

<Front panel assembly>

- Prior to performing the following procedure, remove the rear cover, the side panels, the cassette mechanism assembly, the main board and the front panel assembly.

■ Removing the CD mechanism assembly (See Fig.18 to 21)

1. Disconnect the harness from connector CN721 and CN722, and the card wire from CN766 on the LCD board on the back of the front panel assembly.

2. Remove the five screws M attaching the CD mechanism cover to the front panel. Remove the CD mechanism cover together with the CD mechanism assembly.

3. Release the harness from each hook on the CD mechanism cover.

4. Remove the five screws N attaching the CD mechanism cover and the CD mechanism case. Release the three joints g of the CD mechanism cover and the CD mechanism case by pushing the joint hooks inward.

5. Disconnect the card wire from connector CN603 and the harness from CN605 on the CD servo control board.

6. Remove the CD mechanism assembly from the CD mechanism cover by pulling out it from the three bosses h.

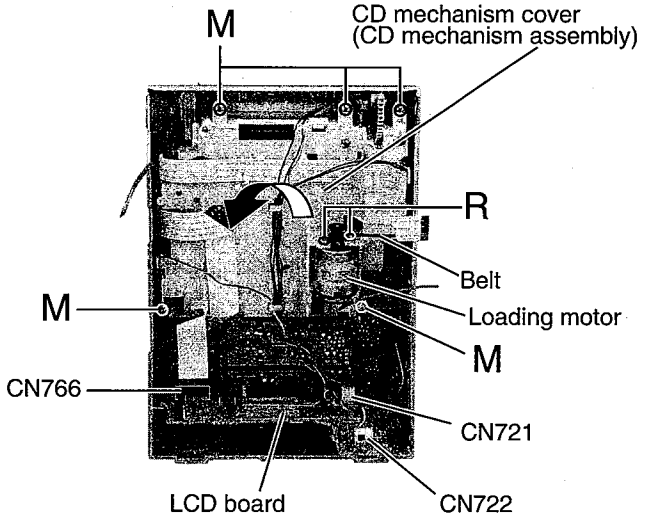


Fig.18

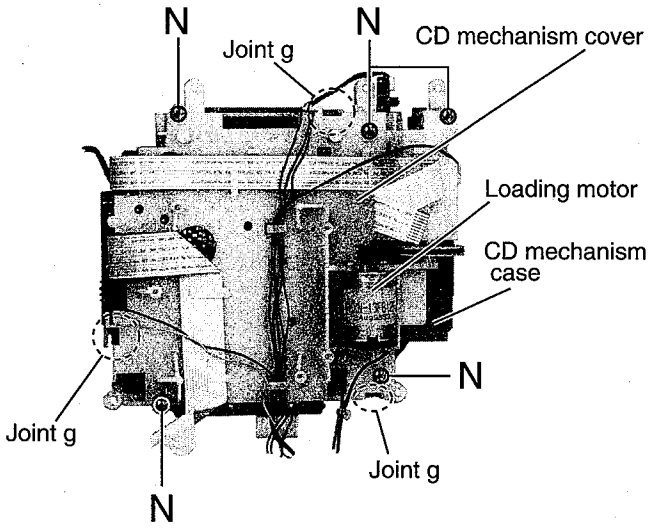


Fig.19

■ Removing the LED board (A) (See Fig.21)

1. Remove the screw O attaching the LED board (A).

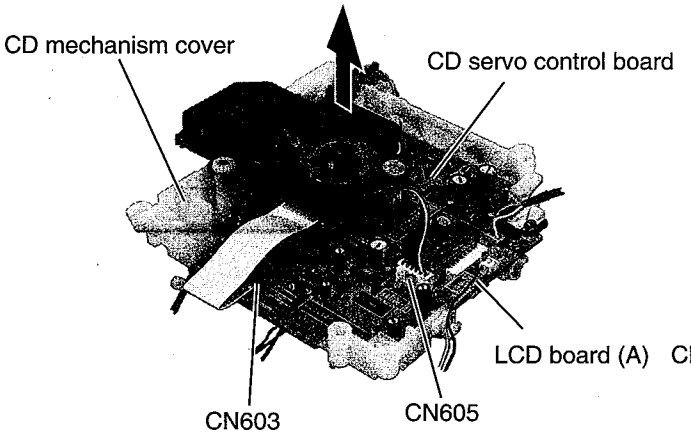


Fig.21

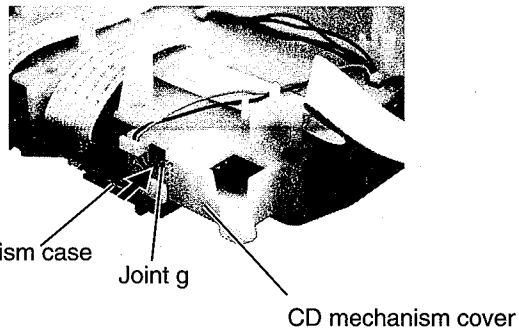


Fig.20

■Removing the LED board (B) (See Fig.22)

- Prior to performing the following procedure, remove the CD mechanism assembly.

1. Remove the screw P attaching the LED board (B).

■ Removing the CD door switch board (See Fig.22)

1. Release the hook i fixing the CD door switch board to the CD mechanism cover.

■Removing the CD servo control board (See Fig.22)

- Prior to performing the following procedure, remove the CD mechanism assembly and the LED board (A) / (B).

1. Remove the two screws Q attaching the CD servo control board.

2. Pull out the CD servo control board in the direction of the arrow by releasing the two joints j.

■ Removing the loading motor (See Fig.18)

1. Remove the belt and the two screws R attaching the loading motor on the back of the front panel assembly.

■Removing the LCD board assembly (See Fig.23)

- Prior to performing the following procedure, remove the CD mechanism cover (CD mechanism assembly).

1. Remove the two screws S attaching the LCD board assembly.

2. Disconnect connector CN781 on the LCD board assembly from the operation switch board.

■Removing the operation switch board (See Fig.24)

- Prior to performing the following procedure, remove the LCD board assembly.

1. Remove the eight screws T attaching the operation switch board.

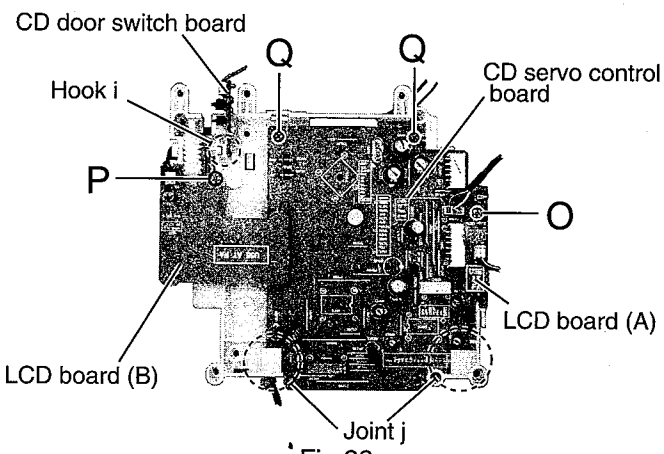


Fig.22

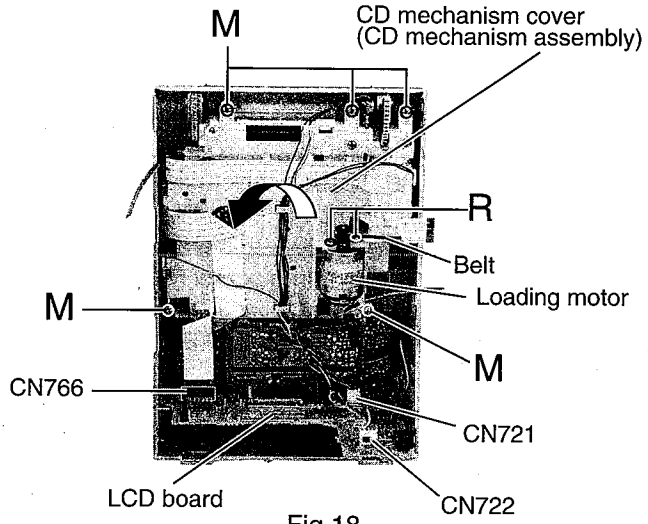


Fig.18

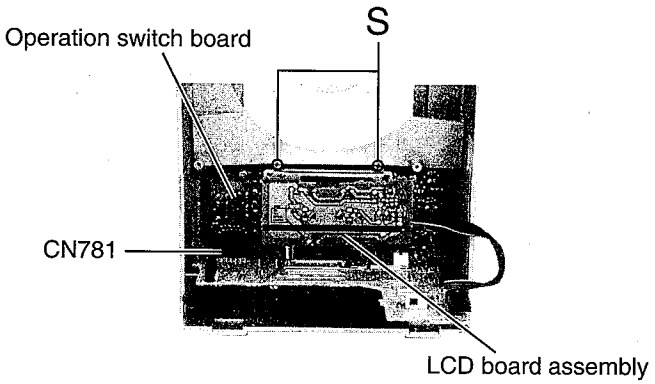


Fig.23

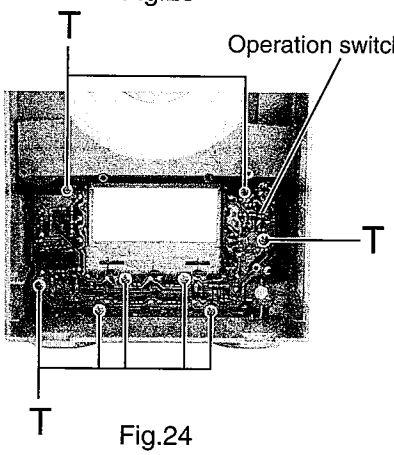


Fig.24

<<Cassette Mechanism Section>>

■ Removing the Playback/Recording & Eraser Head (See Figs. 1 and 2)

1. While shifting the trigger arms seen on the right side of the head mount in the arrow direction, turn the flywheel R in counterclockwise direction until the head mount has gone out with a click (See Fig. 1).
2. When the flywheel R is rotated in counterclockwise direction, the Playback/Recording & Eraser head will be turned in counterclockwise direction from the position in Fig. 2 to that in Fig. 3.
3. At this position, disconnect the flexible P.C. board (outgoing from the Playback/Recording & Eraser head) from the connector CN31 on the head amplifier & mechanism control P.C. board.
4. After dismounting the FPC holder, remove the flexible P.C. board.
5. Remove the flexible P.C. board from the chassis base.
6. Remove the spring Afro behind the Playback/Recording & Eraser head.
7. Loosen the reversing azimuth screw retaining the Playback /Recording & Eraser head.
8. Take out the Playback/Recording & Eraser head from the front of the head mount.
9. The Playback/Recoring & Eraser head should also be removed similarly according to Steps 1 ~ 8 above.

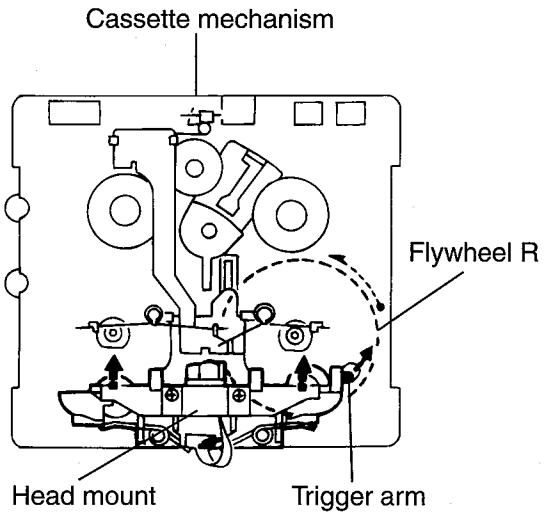


Fig. 1

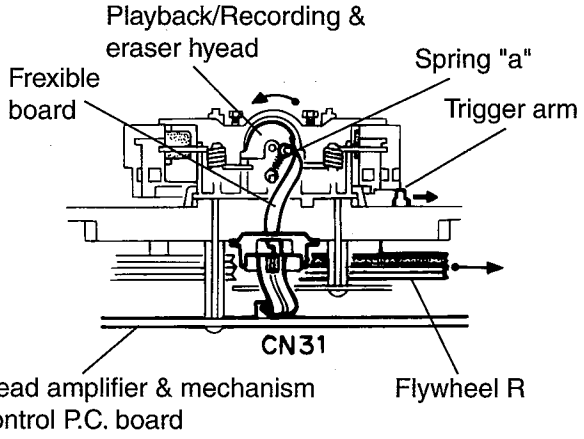


Fig. 2

■ Reassembling the Playback/Recording & Eraser Head

1. Reassemble the playback head from the front of the head mount to the position as shown in Fig. 3.
2. Fix the reversing azimuth screw.
3. Set the spring "a" from behind the Playback/Recording & Eraser head.
4. Attach the flexible P.C. board to the chassis base, and fix it with the FPC holder as shown in Fig. 3.
5. The Playback/Recording & Eraser head should also be reassembled similarly to Step 1 ~ 4 above.

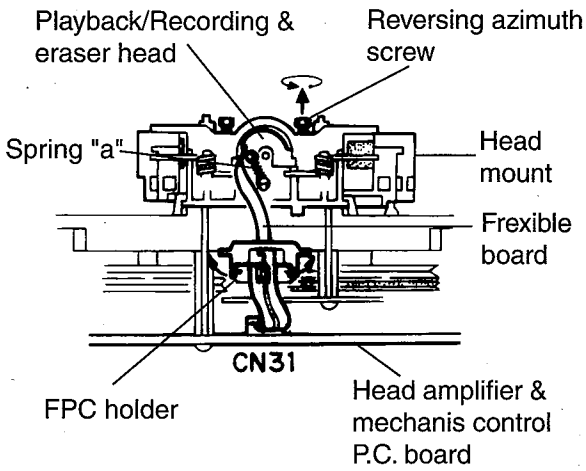


Fig. 3

■ Removing the Head amplifier & Mechanism control P.C. board

(See Fig. 4)

1. Remove the cassette mechanism assembly.
2. After turning over th cassette mechanism assembly, remove the three screws "1" retaining the head amplifier & mechanism control P.C. board.
3. Disconnect the connector CN32 on the P.C. board including the connector CN 1 on the reel pulse P.C. board.
4. When necessary, remove the 4 pin parallel wire soldered to the main motor.

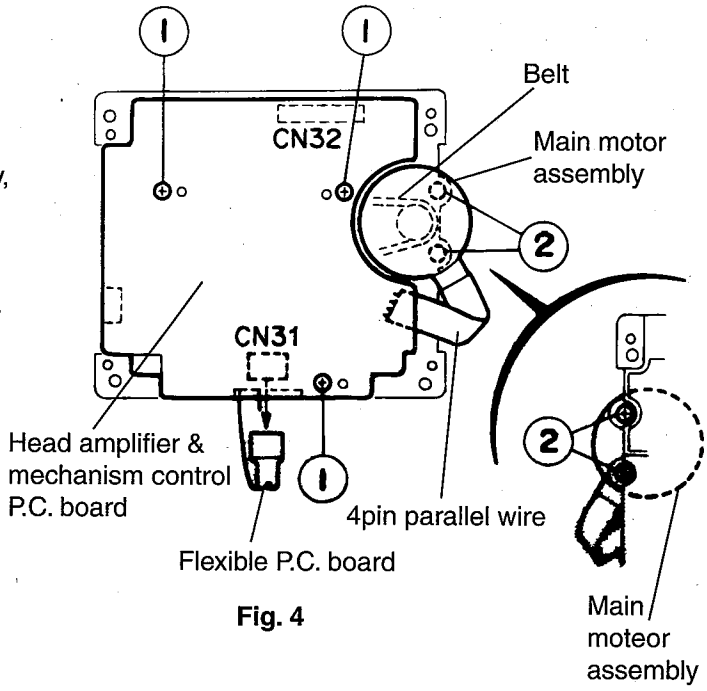


Fig. 4

■ Removing the Main Motor Assembly

(See Fig. 4~6)

1. Remove the two screws "2" retaining the main motor assembly (See Fig. 4, 4a).
2. While raising the main motor, remove the capstan belt from the motor pulley (See Fig. 4a).

Caution 1: Be sure to handle the capstan belt so carefully that this belt will not be stained by grease and other foreign matter. Moreover, this belt should be hanged while referring to the capstan belt hanging method in Fig. 5, 6.

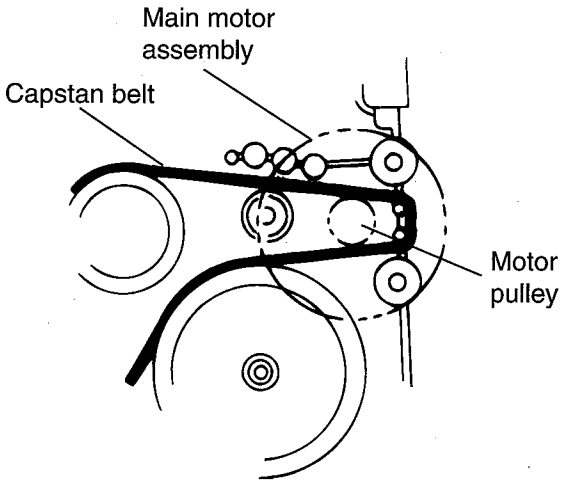


Fig. 4a

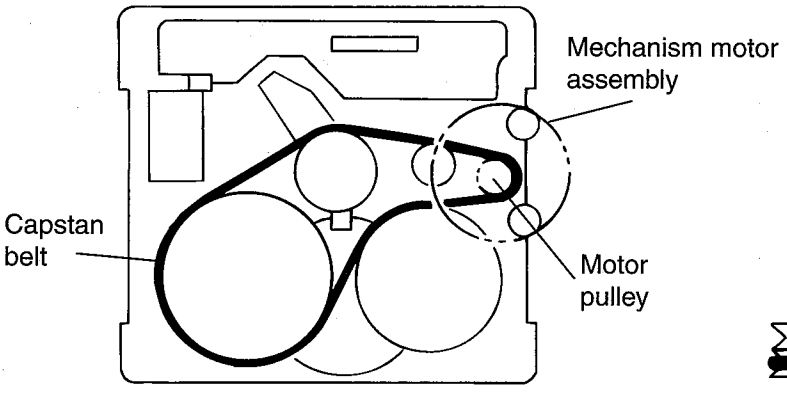


Fig. 5

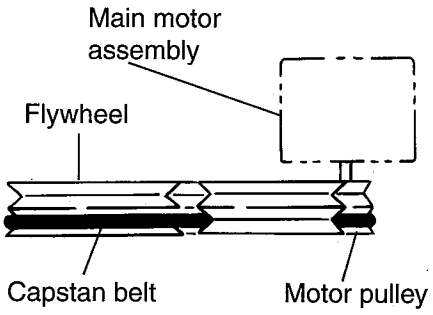


Fig. 6

■ Removing the Flywheel

(See Figs. 7 and 8)

1. Remove the head amplifier & mechanism control P.C. board.
2. Remove the main motor assembly.
3. After turning over the cassette mechanism, remove the slit washers "b" and "c" fixing the capstan shafts R and L, and pull out the flywheel R and L respectively from behind the cassette mechanism.

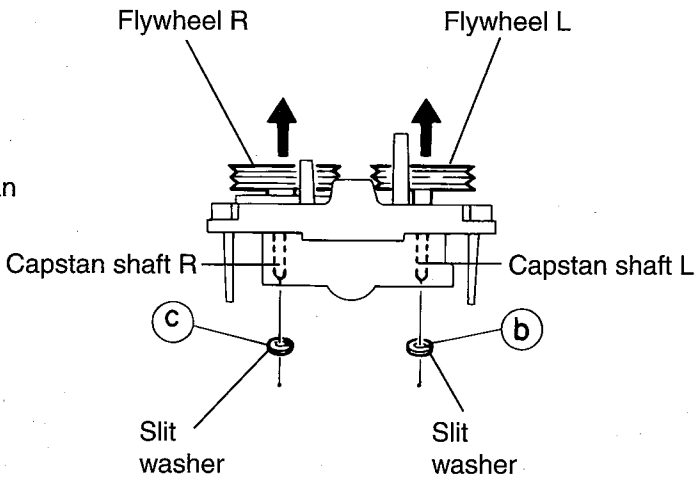


Fig.7

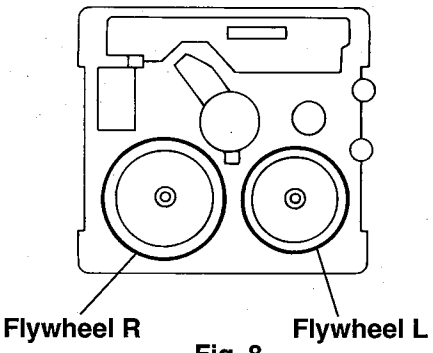


Fig. 8

■ Removing the Reel Pulse P.C. board and Solenoid

(See Fig. 9)

1. Remove the five pails "d"~"h" reataining the reel pulse P.C. board.
2. From the surface of the reel pulse P.C. board parts, remove the two pawls "i" and "j" retaining the solenoid.

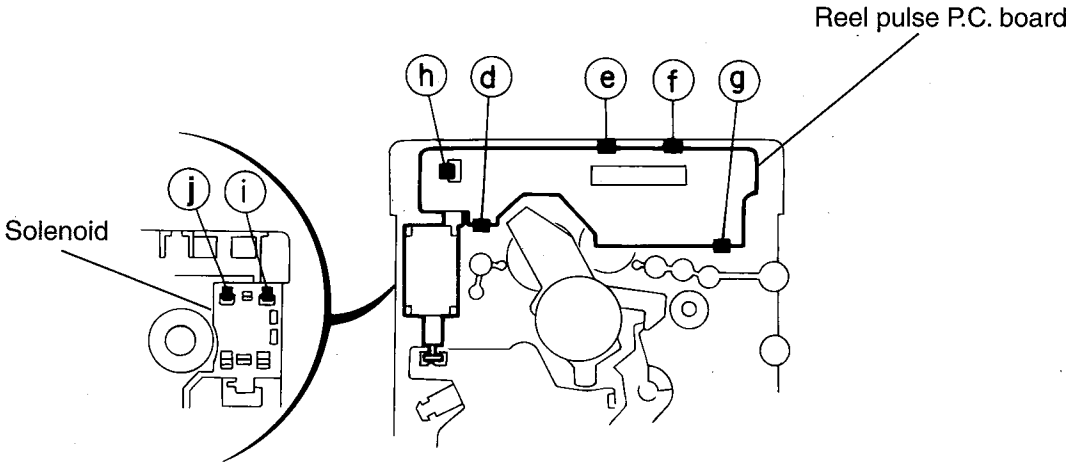


Fig. 9

Main adjustment

■ Measurement Instruments Required for Adjustment

1. Low frequency oscillator
   This oscillator should have a capacity to output 0dBs to 600 Ω at an oscillation frequency of 50Hz-20kHz.
2. Attenuator impedance : 600 Ω
3. Electronic voltmeter
4. Distortion meter
5. Frequency counter
6. Wow & flutter meter
7. Test tape
   VTT703L : Head azimuth
   VT712 : Tape speed and running unevenness (3kHz)
   VT724 : Reference level (1kHz)
8. Blank tape
   TYPE Ⅰ : AC-225
   TYPE Ⅱ : AC-514
9. Torque gauge : For play and back tension
   FWD(TW2111A), REV(TW2121a) and FF/REW(TW2231A)
10. Test disc: CTS-1000

■ Measurement conditions

Power supply voltage
: AC230V (50Hz)----B/E/EE/EN
: AC110/127V/230V(50/60Hz)
: UB/UF/US/UX/U
Reference output : Speaker : 0.775V/4Ω
: Headphone : 0.077V/32Ω
Reference frequency and
input level ---------- 1kHz, AUX : -8dBs
MIX MIC: -54dBs (UB/UF/US/UX/U)
Input for confirming recording and playback
characteristics ---------- AUX : -28dBs
Measurement output terminal ------- at Speaker J3002
※ Load resistance ---------- 4Ω

● Radio Input signal

AM frequency ---------- 400Hz
AM modulation ---------- 30%
FM frequency ---------- 400Hz
FM frequency deviation ---------- 22.5kHz

● Tuner section

B/E/EN version
FM Band cover: 87.5~108MHz
MW Band cover: 522~1,629kHz
LW Band cover: 144~288kHz
EE version
FM Band cover: 65~74MHz, 87.5~108MHz
MW Band cover: 522~1,629kHz
LW Band cover: 144~288kHz
UB/UF/US/UX/U version
FM Band cover: 87.5~108MHz
MW Band cover: 531~1,602kHz, 530~1,710kHz
SW Band cover: SW1 2.3~6.995MHz
: SW2 7~21.85MHz
Voltage applied to tuner ---------- +B : DC5.7V
VT : DC 12V
Reference measurement
output ---------- 26.1mV(0.28V)/3Ω
Input positions ------- AM : Standard loop antenna
FM : TP1 (hot) and TP2 (GND)

● Standard measurement position of volume

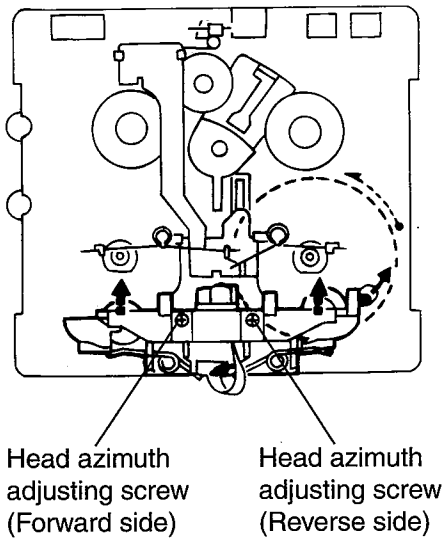
Function switch ---------- to Tape
Beat cut switch ---------- to Cut
Super Bass/Active hyper Bass ---------- to OFF
Bass Treble ---------- to Center
Adjustment of main volume to reference output
VOL : 28

Precautions for measurement

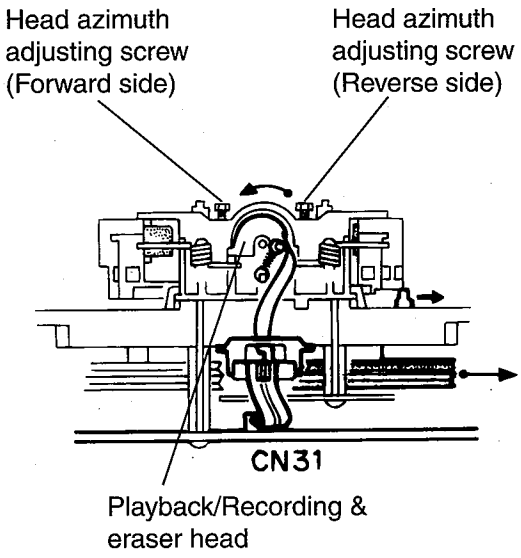
1. Apply 30pF and 33kΩ to the IF sweeper output side and 0.082μF and 100kΩ in series to the sweeper input side.
2. The IF sweeper output level should be made as low as possible within the adjustable range.
3. Since the IF sweeper is a fixed device, there is no need to adjust this sweeper.
4. Since a ceramic oscillator is used, there is no need to perform any MIX adjustment.
5. Since a fixed coil is used, there is no need to adjust the FM tracking.
6. The input and output earth systems are separated. In case of simultaneously measuring the voltage in both of the input and output systems with an electronic voltmeter for two channels, therefore, the earth should be connected particularly carefully.
7. In the case of BTL connection amp., the minus terminal of speaker is not for earthing. Therefore, be sure not to connect any other earth terminal to this terminal. This system is of an BTL system.
8. For connecting a dummy resistor when measuring the output, use the wire with a greater code size.
9. Whenever any mixed tape is used, use the band pass filter (DV-12).

<<Arrangement of Adjusting Position>>

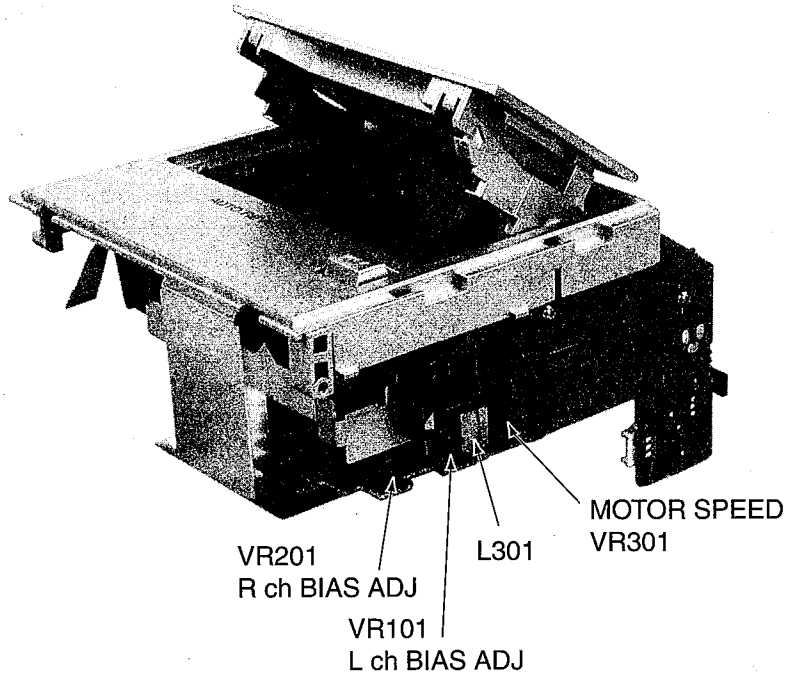
Cassette mechanism section



Cassette mechanism section (Back side)



Front panel assembly section



■ Tape Recorder Section

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Confirmation of head angle	Test tape : VTT703L (8kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 4Ω) : Headphone terminal	1 Playback the test tape VTT703L (8kHz) 2 With the recording & playback mechanism, adjust the head azimuth screw so that the forward and reverse output levels become maximum. After adjustment, lock the head azimuth at least by half turn. 3 In either case, this adjustment should be performed in both the forward and reverse directions with the head azimuth screw.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Confirmation of tape speed	Test tape : VT712 (3kHz) Measurement output terminal : Headphone terminal	Adjust VR37 so that the frequency counter reading becomes 2,940~3,090Hz ± when playing back the test tape VT712 (3kHz) with playback and recording mechanism after ending forward winding of the tape.	Tape speed of deck : 2,940 ~ 3,090Hz	VR301

■ Reference Values for Confirmation Items

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Difference between the forward and reverse speed	Test tape : VT712 (3kHz) Measurement output terminal : Speaker terminal Speaker R (Load resistance: 4 Ω) Measurement output terminal : Headphone	When the test tape VT712 (3kHz) has been played back with the recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanism should be 6.0Hz or less.	6.0Hz or less	Head azimuth screw
Wow & flutter	Test tape : VT712 (3kHz) Measurement output terminal : Headphone terminal	When the test tape VT712 (3kHz) has been played back with the recording and playback mechanism at the beginning of forward winding, the frequency counter reading of wow & flutter should be 0.25% or less (WRMS).	0.25% or less (WRMS)	

■ Electrical Performance

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Adjustment of recording bias current (Reference Value)	・Mode: Forward or reverse mode ・Recording mode ・Test tape : AC-514 to TYPE Ⅱ and AC-225 to TYPE Ⅰ Measurement output terminal : Both recording and headphone terminals	1 With the recording and playback mechanism, load the test tapes (AC-514 to TYPE Ⅱ and AC-225 to TYPE Ⅰ), and set the mechanism to the recording and pausing condition in advance. 2 After connecting 100 Ω in series to the recorder head, measure the bias current with a valve voltmeter at both of the terminals. 3 After resetting the [PAUSE] mode, start recording. At this time, adjust VR31 for Lch and VR32 for Rch so that the recording bias current values become 4.0 μA (TYPE Ⅰ) and 4.20 μA (TYPE Ⅱ).	AC-225 : 4.20 μA AC-514 : 4.0 μA	L ch : VR101 R ch : VR201
Adjustment of recording and playback frequency characteristics	Reference frequency : 1kHz and 10kHz (REF.: -20dB) Test tape : AC-514 to TYPE Ⅱ Measurement input terminal : OSC IN	1 With the recording and playback mechanism, load the test tapes (AC-514 to TYPE Ⅱ), and set the mechanism to the recording and pausing condition in advance. 2 While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and playback the rape. 3 While recording and playback the test tape in TYPE Ⅱ, adjust VR31 for Lch and VR32 for Rch so that the output deviation between 1kHz and 10kHz becomes -1dB±2dB.	Output deviation between 1kHz and 10kHz : -1dB±2dB	L ch : VR101 R ch : VR201

■ Reference Values for Electrical Function Confirmation Items

Items	Measurement conditions	Measurement method	Standard Values	Adjusting positions
Recording bias frequency	Forward or reverse ・Test tape : TYPE Ⅱ (AC-514) ・Measurement terminal : BIAS TP on P.C. board	1 While changing over to and from BIAS 1 and 2, confirm that the frequency is changed. 2 With the recording and playback mechanism, load the test tape. (AC-514 to TYPE Ⅱ), and set the mechanism to the recording and pausing condition in advance. 3 Confirm that the BIAS TP frequency on the P.C. board is 100kHz ± 6kHz.	100 kHz ±6 kHz	
Eraser current (Reference value)	Forward or reverse ・Recording mode ・Test tape : AC-514 to TYPE Ⅱ and AC-225 to TYPE Ⅰ Measurement terminal : Both of the eraser head terminals	1 While recording and playback mechanism, load the test tapes (AC-514 to TYPE Ⅱ and AC-225 to TYPE Ⅰ), and set the mechanism to the recording and pausing conditions in advance. 2 After setting to the recording conditions, connect 1W in series to the eraser head on the recording and playback mechanism side, and measure the eraser current from both of the eraser terminals.	TYPE Ⅱ : 120 mA TYPE Ⅰ : 75 mA	

Flow of functional operation until TOC read

Power ON → Power Key → Slider turns REST SW ON.

Check Point: Check that the voltage at the pin17 of CN604 is 0V (a moment)?

Slider turns REST SW ON.
↓
Automatic tuning of TE offset
↓
Laser ON → Check that the voltage at the pin3 of IC601 + side is + 5V?
↓
Detection of disc
↓
Automatic tuning of Foucus offset
↓
Automatic measurement of Focus A-curve amplitude → Confirm that the Focus error S-cuve siganl at the pin27 of IC601 is approx.2Vp-p
↓
Disc is rotated → Confirm that the siganl from pin24 IC603 is 0V as a accelerated pulse during approx.400ms.
↓
Focus servo ON (Tracking servo ON)
↓
Automatic measurement of Tracking error amplitude → Confirm the waveform of the Tracking error signal at the pin25 of IC601 (R612) (See fig-1)
↓
Automatic tuning of Tracking error balance
↓
Automatic tuning of Focus error balance
↓
Automatic tuning of Focus error gain
↓
Automatic tuning of Tracking error gain
↓
TOC reading → Confirm the eys-pattern at the lead of TP1
↓
Play a disc

■ Tracking error waveform at TOC reading

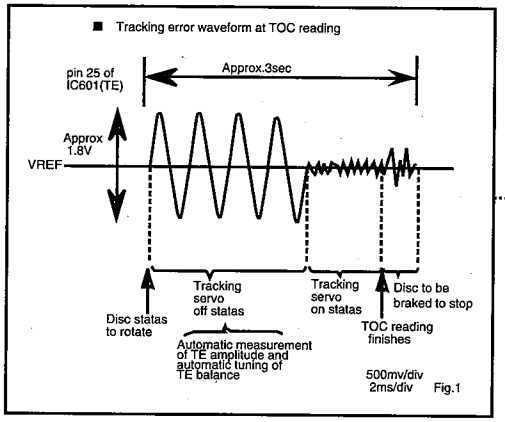
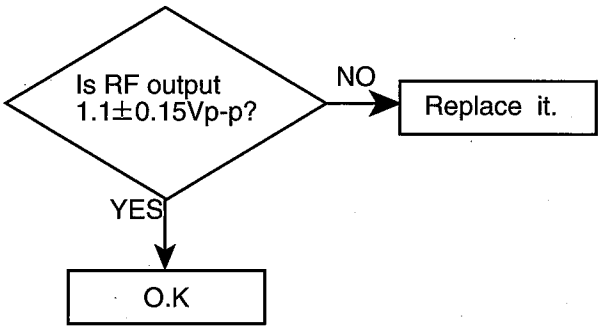


Fig.1

Maintenance of laser pickup

(1) Cleaning the pick up lens
Befor you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

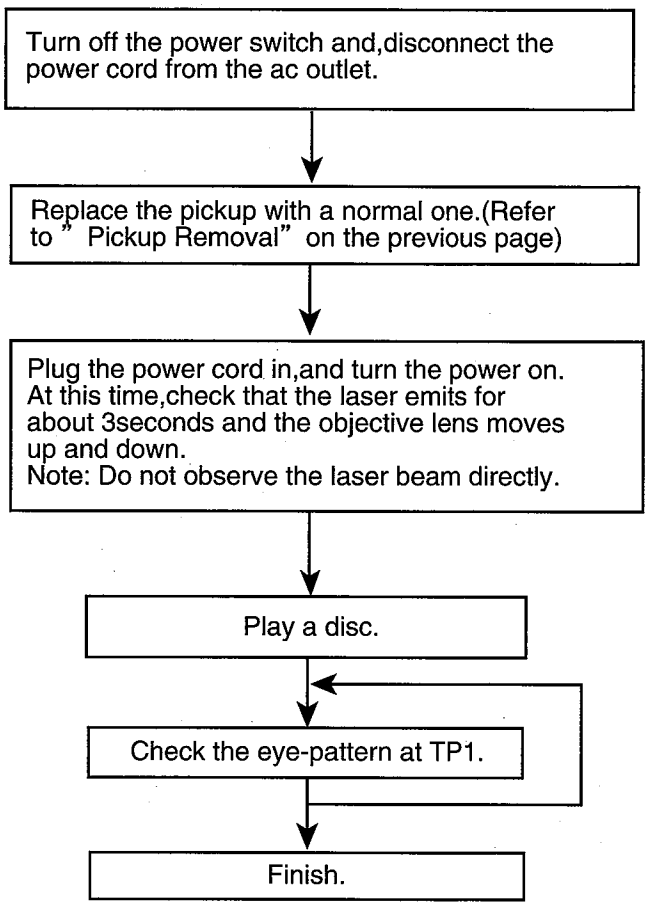
(2) Life of the laser diode (Fig.1)
When the life of the laser diode has expired, the following symptoms wil appear.
(1) The level of RF output (EFM output:amplitude of eye pattern) will below.



(Fig.1)

(3) Semi-fixed resistor on the APC PC board
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power.Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value,the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally,the laser pickup may be damaged due to excessive current.

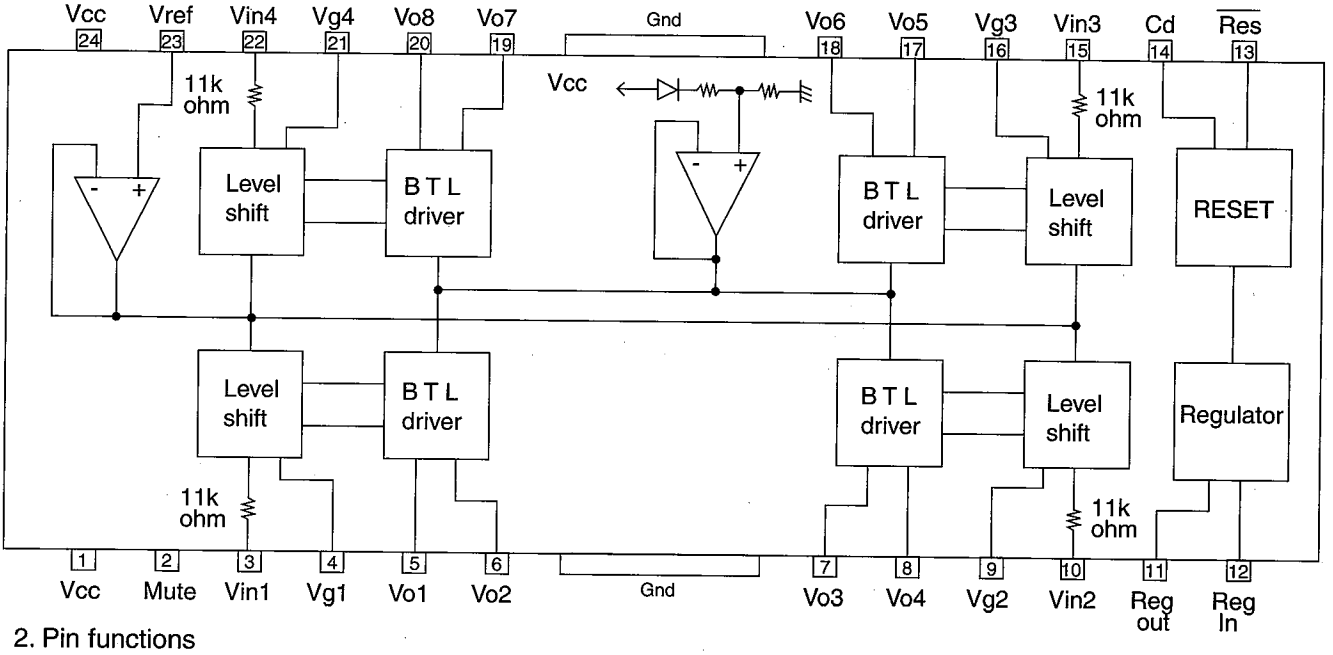
Replacement of laser pickup


Turn off the power switch and,disconnect the power cord from the ac outlet.
Replace the pickup with a normal one.(Refer to " Pickup Removal" on the previous page)
Plug the power cord in,and turn the power on. At this time,check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc.
Check the eye-pattern at TP1.
Finish.

Description of major ICs

■ LA6541-X(IC541) : Servo Driver

1. Pin Layout & Block Diagram

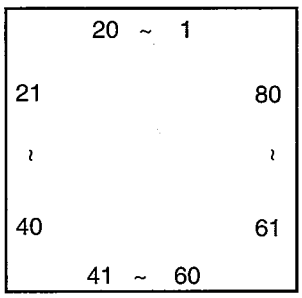


2. Pin functions

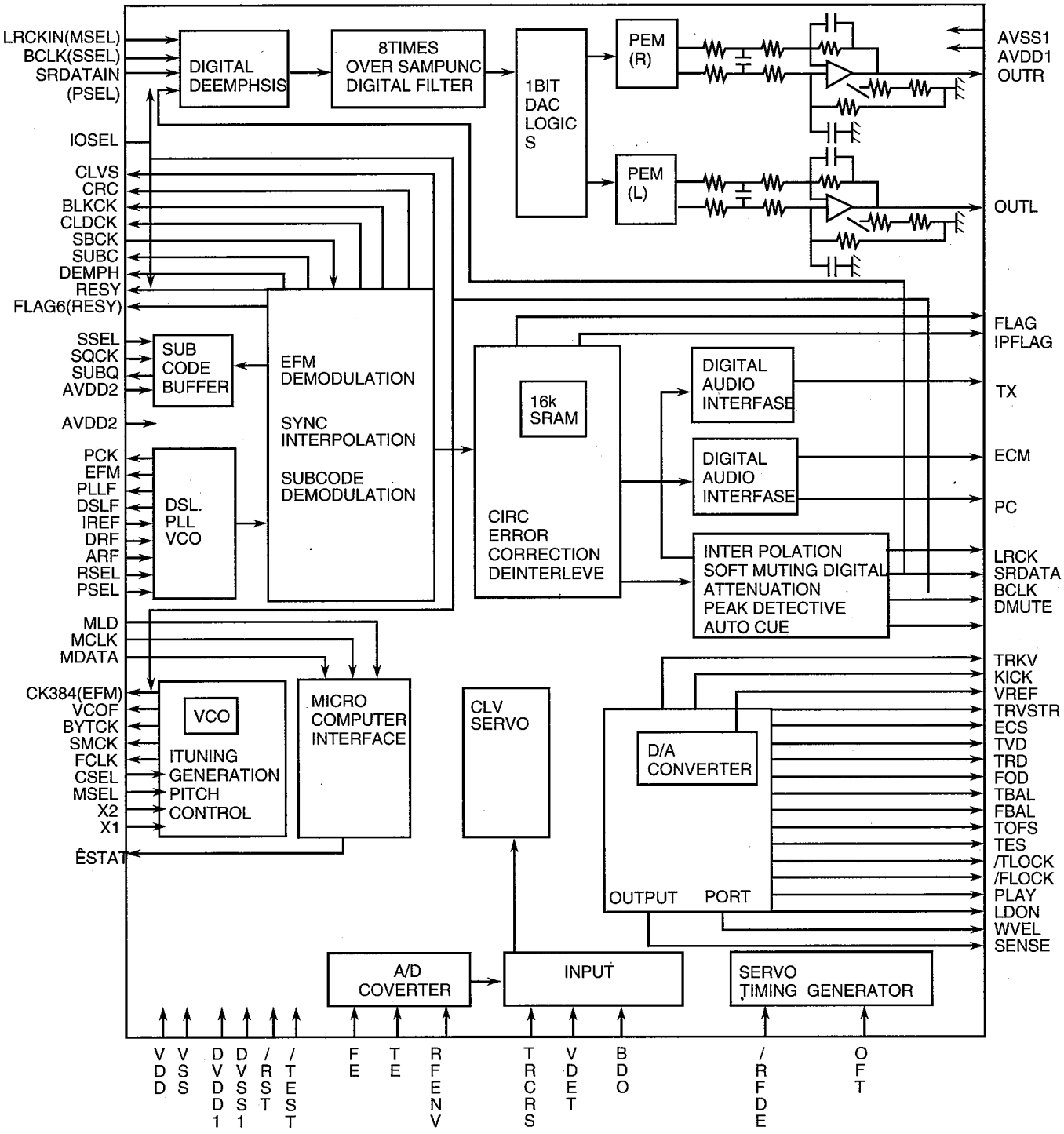
Pin No.	Symbol	Function
1	Vcc	Power supply (Shorted to pin 24)
2	Mute	All BTL amplifier outputs ON/OFF
3	Vin1	BTL AMP 1 input pin
4	Vg1	BTL AMP 1 input pin (For gain adjustment)
5	Vo1	BTL AMP 1 input pin (Non inverting side)
6	Vo2	BTL AMP 1 input pin (Inverting side)
7	Vo3	BTL AMP 2 input pin (Inverting side)
8	Vo4	BTL AMP 2 input pin (Non inverting side)
9	Vg2	BTL AMP 2 input pin (For gain adjustment)
10	Vin2	BTL AMP 2 input pin
11	Reg Out	External transistor collector (PNP) connection. 5V power supply output
12	Reg In	External transistor (PNP) base connection
13	Res	Reset output
14	Cd	Reset output delay time setting (Capacitor connected externally)
15	Vin3	BTL AMP 3 input pin
16	Vg3	BTL AMP 3 input pin (For gain adjustment)
17	Vo5	BTL AMP 3 output pin (Non inverting side)
18	Vo6	BTL AMP 3 output pin (Inverting side)
19	Vo7	BTL AMP 4 output pin (Inverting side)
20	Vo8	BTL AMP 4 output pin (Non inverting side)
21	Vg4	BTL AMP 4 output pin (For gain adjustment)
22	Vin4	BTL AMP 4 output pin
23	Vref	Level shift circuit's reference voltage application
24	Vcc	Power supply (Shorted to pin 1)

■ MN35510 (IC651) : DIGITAL SERVO&DIGITAL SIGNAL PROCESSER

1. Terminal Layout



2.Block Diagram

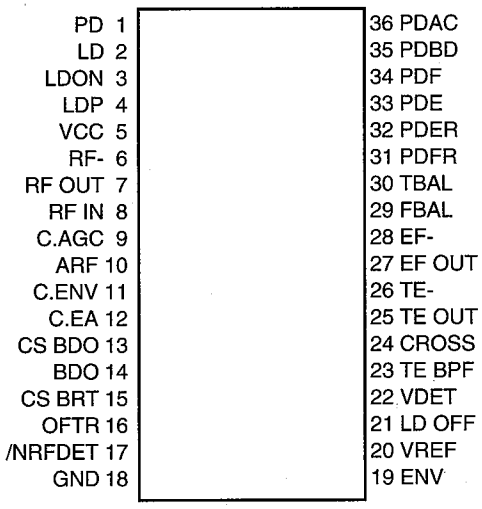


3. Description

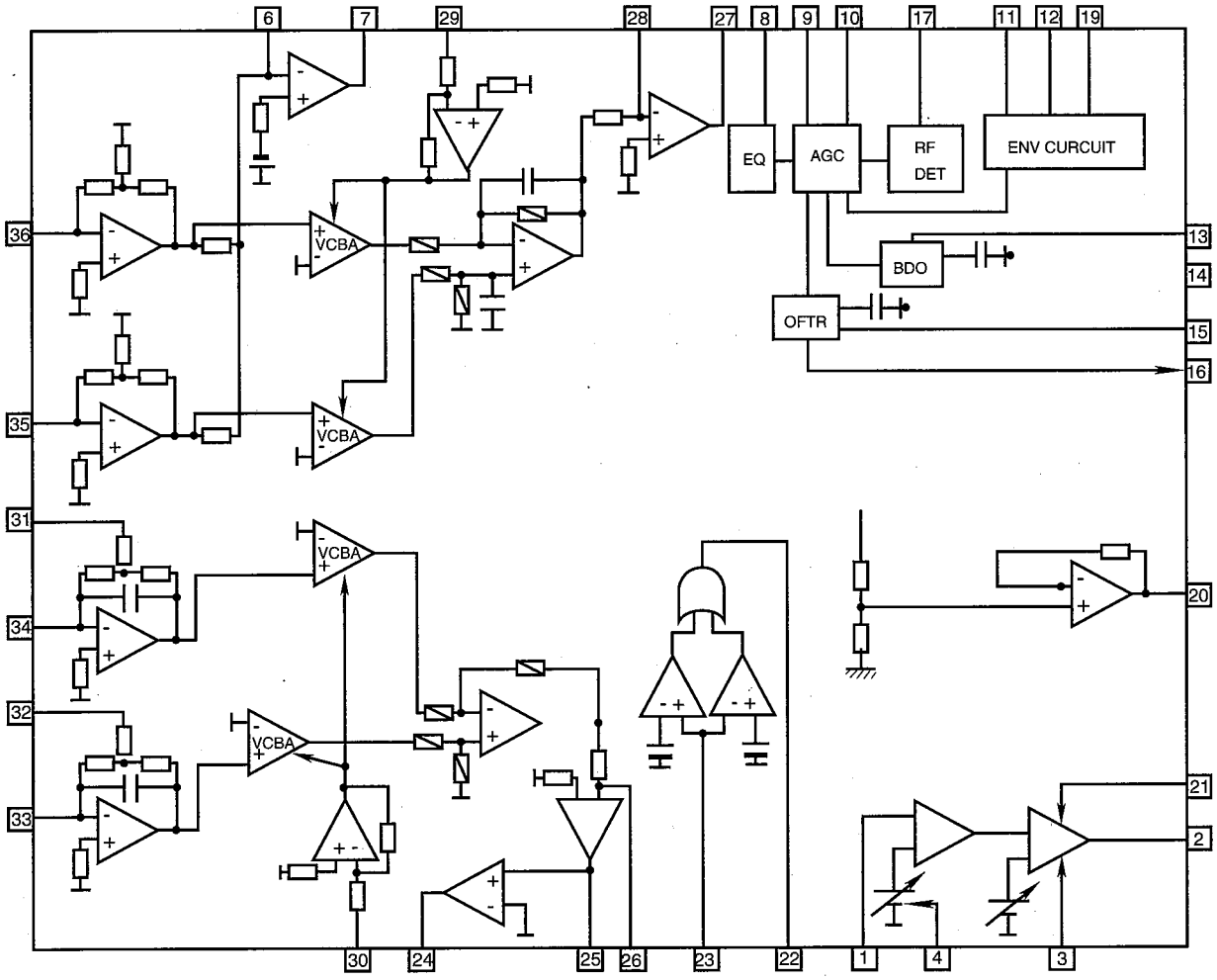
Pin No.	symbol	I/O	Description	Pin No.	symbol	I/O	Description
1	BCLK	O	Not used	41	TES	O	Tracking error shunt signal output(H:shunt)
2	LRCK	O	Not used	42	PLAY	—	Not used
3	SRDATA	O	Not used	43	WVEL	—	Not used
4	DVDD1	—	Power supply (Digital)	44	ARF	I	RF signal input
5	DVSS1	—	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface output	46	DRF	I	Bias pin for DSL
7	MCLK	I	μcom command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	μcom command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	μcom command load signal input	49	VCOF	—	Not used
10	SENSE	O	Sence signal output	50	AVDD2	—	Power supply(Analog)
11	FLOCK	O	Focus lock signal output Active :Low	51	AVSS2	—	Connected to GND(Analog)
12	TLOCK	O	Tracking lock signal output Active :Low	52	EFM	—	Not used
13	BLKCK	O	sub-code·block·clock signal output	53	PCK	—	Not used
14	SQCK	I	Outside clock for sub-code Q resister input	54	PDO	—	Not used
15	SUBQ	O	Sub-code Q -code output	55	SUBC	—	Not used
16	DMUTE	—	Connected to GND	56	SBCK	—	Not used
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	—	Connected to GND(for X'tal oscillation circuit)
18	RST	I	Reset signal input (L:Reset)	58	XI	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	—	Not used	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	—	Not used	60	VDD	—	Power supply(for X'tal cscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	—	Not used
22	TVD	O	Traverse drive output	62	CLDCK	—	Not used
23	PC	—	Not used	63	FLAG	—	Not used
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	—	Not used
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	—	Not used
26	KICK	O	Kick pulse output	66	CLVS	—	Not used
27	TRD	O	Tracking drive output	67	CRC	—	Not used
28	FOD	O	Focus drive output	68	DEMPH		Not used
29	VREF	I	Reference voltage input pin for D/A output block (TVD,FOD,FBA,TBAL)	69	RESY	—	Not used
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	—	pull up
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	—	pull up
32	FE	I	Focus error signal input(Analog input)	72	AVDD1	—	Power supply(Digital)
33	TE	I	Tracking error signal input(Analog input)	73	OUT L	O	Lch audio output
34	RF ENV	I	RF envelope signal input(Analog input)	74	AVSS1	—	Connected to GND
35	VDET	I	Vibration detect signal input(H:detect)	75	OUT R	O	Rch audio output
36	OFT	I	Off track signal input(H:off track)	76	RSEL	—	pull up
37	TRCRS	I	Track cross signal input	77	CSEL	—	Connected to GND
38	RFDET	I	RF detect signal input(L:detect)	78	PSEL	—	Connected to GND
39	BDO	I	BDO input pin(L:detect)	79	MSEL	—	Connected to GND
40	LDON	O	Laser ON signal output(H:on)	80	SSEL	—	Pull up

■AN8806SB-W(IC301) :RF&SERVO AMP

1.Pin layout



2.Block diagram

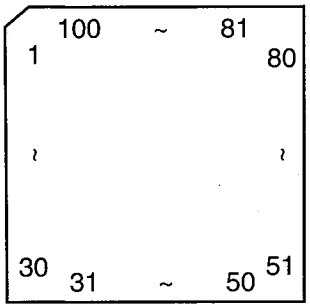


3. Pin function

Pin No.	symbol	I/O	Function
1	PD	I	APC amp . Input terminal
2	LD	O	APC amp . Output terminal
3	LD ON	I	LD ON/OFF control terminal
4	LDP	--	Connect to GND
5	VCC	--	Power supply
6	RF-	I	RF amp . Reversing input terminal
7	RF OUT	O	RFamp . Output terminal
8	RF IN	I	AGC input terminal
9	C.AGC	I/O	AGC loop filter connection terminal
10	ARF	O	ARF output terminal
11	C.ENV	I/O	RF detection capacity connection terminal
12	C.EA	I/O	HPF-amp capacity connection terminal
13	CS BDO	I/O	Capacity connection terminal for RF discernment side envelope detection
14	BDO	O	BDO output terminal
15	CS BRT	I/O	Capacity connection terminal for RF discernment side envelope detection
16	OFTR	O	OFTR output terminal
17	/NRFDET	O	RFDET output terminal
18	GND	--	Connect to GND
19	ENV	O	3TENV output terminal
20	VREF	O	VREF output terminal
21	LD OFF	--	APC OFF control terminal
22	VDET	O	VDET output terminal
23	TE BPF	I	VDET input terminal
24	CROSS	O	CROSS output terminal
25	TE OUT	O	TE amp . Output terminal
26	TE-	I	FE amp . Reversing input terminal
27	FE OUT	O	FE amp . output terminal
28	FE-	I	FE amp . Reversing input terminal
29	FBAL	I	F.BAL control terminal
30	TBAL	I	T.BAL control terminal
31	PDFR	I/O	I-V amp conversion resistance adjustment terminal
32	PDER	I/O	I-V amp conversion resistance adjustment terminal
33	PDF	I	I-V amp input terminal
34	PDE	I	I-V amp input terminal
35	PD BD	I	I-V amp input terminal
36	PD AC	I	I-V amp input terminal

■ UPD78064GF-108 (IC701): System CPU

1.Pin layout

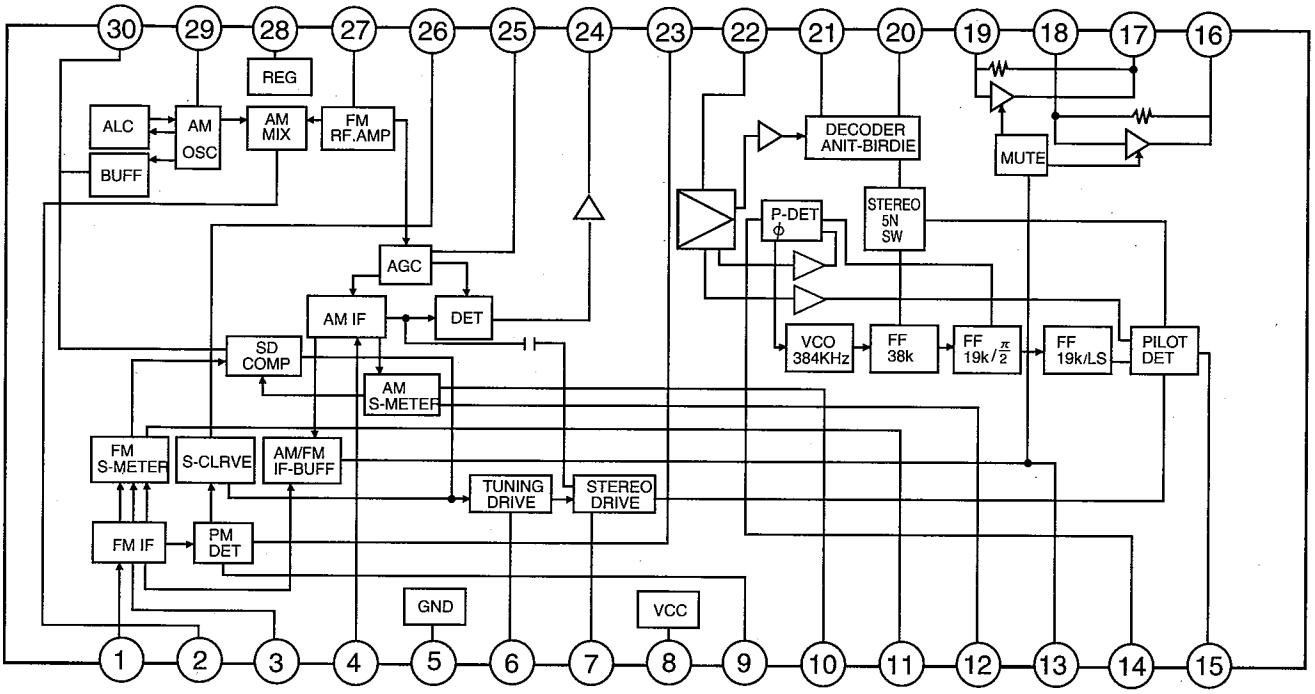


2.Pin function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	USDATA	I/O	Serial data	29	URESET/CLOSE	I	[RESET/CLOSE] switch
2	USCK	O	Serial clock	30	USAFETY1	I	Abnormal voltage detection 1
3	UQRIN	I	CD Q code data	31	USAFETY0	I	Abnormal voltage detection 2
4	UNC	-	Non connect	32	UKEY1	I	Body key input 1
5	USQCK	O	CD Q code data synchronizing clock	33	UKEY0	I	Body key input 0
6	ICVSS	-	Connected to VSS	34	UTAPE0	I	Tape switch 0
7	UX2	-	Main system clock	35	UTAPE1	I	Tape switch 1
8	UX1	I	Main system clock	36	AVDD	-	AD converter power supply
9	VDD	-	Power supply	37	UAVREF	-	AD converter reference voltage
10	UXT1	I	Sub system clock	38	UBUP	I	Backup power supply decision
11	UXT2	-	Sub system clock	39	UFTUNER	O	Function tuner
12	URESET	I	Reset	40	VSS	-	GND
13	UREM	I	Remote control	41	UMPX	I	FM stereo detection
14	URDSCK	-	Non connect	42	UPERIOD	O	Tuner PLL strobe
15	UJOG1	I	Jog encoder 1	43	UJOGB	I	JOG encoder 2
16	UBEAT2	O	Main clock selection 2	44	UBASS	O	BASS control
17	UBEAT1	O	Main clock selection 1	45	UTRE	O	TRE control
18	U+BCTL	O	Switched 5V control	46	UVOL	O	VOL.control
19	UXRESET	O	CD LSI reset	47	USBASS	O	AHB on/off
20	UMCLK	O	CD LSI command clock	48	USMUTE	O	System muting
21	UMDATA	O	CD LSI command data	49	UPOUT	O	Power ON/OFF
22	UMLD	O	CD LSI command load	50	UFCD	O	Function CD
23	UPBMUTE	O	Tape playback mute	51~54	COM0~3	O	LCD common
24	ULATCH	O	Tape IC strobe	55	BIAS	-	LCD bias voltage
25	UREEL	I	Tape end detection	56~58	VLC0~2	-	LCD bias voltage
26	UFAUX	O	Function AUX	59	VSS	-	GND
27	UAVSS	-	AD converter GND	60~99	S0~39	O	LCD segment
28	USAFEYCD	I	CD abnormal voltage detection	100	USTATUS	I	LCD LSI status

■ LA1838(IC102): FM AM IF AMP&detector, FM MPX Decoder

1. Block Diagram

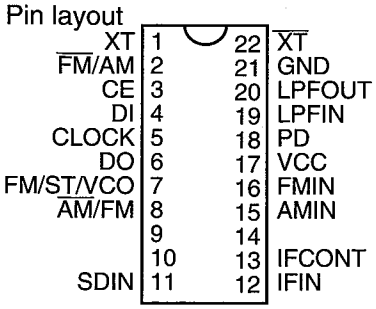


2. Pin Function

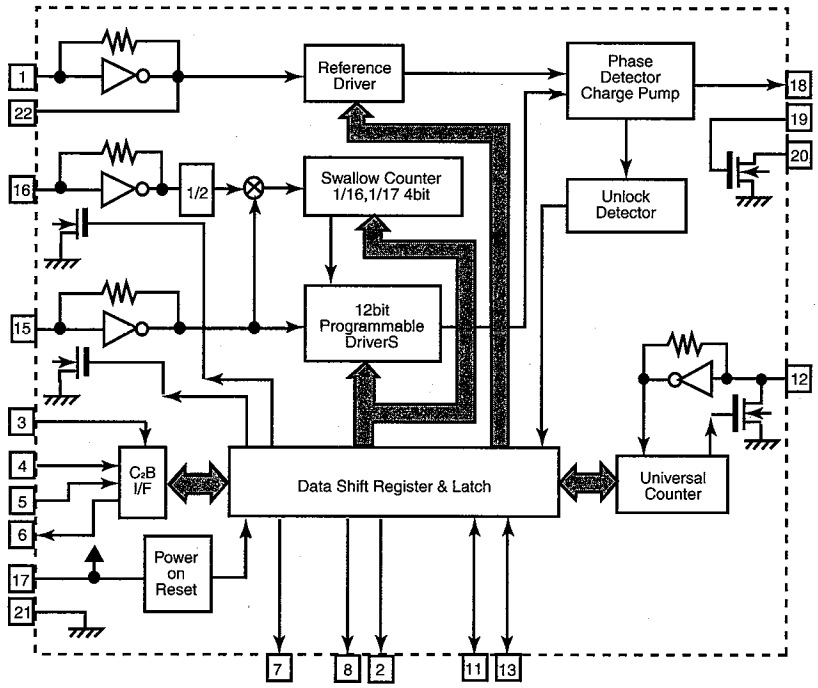
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF signal.	16	R OUT	O	Right channel signal output.
2	AM MIX	O	This is an out put terminal for AM mixer.	17	L OUT	O	Left channel signal output.
3	FM IF	I	Bypass of FM IF	18	R IN	I	Input terminal of the Right channel post AMP.
4	AM IF	I	Input of AM IF Signal.	19	L IN	I	Input terminal of the Left channel post AMP.
5	GND	—	This is the device ground terminal.	20	RO	O	Mpx Right channel signal output.
6	TUNED	O	When the set is tunning,this terminal becomes "L".	21	LO	O	Mpx Left channel signal output.
7	STEREO	O	Stereo indicator output. Stereo "L", Mono: "H"	22	IF IN	I	Mpx input terminal
8	VCC	—	This is the power supply terminal.	23	FM OUT	O	FM detection output.
9	FM DET	—	FM detect transformer.	24	AM DET	O	AM detection output.
10	AM SD	—	This is a terminal of AM ceramic filter.	25	AM AGC	I	This is an AGC voltage input terminal for AM
11	FM VSM	O	Adjust FM SD sensitivity.	26	AFC	—	This is an output terminal of voltage for FM-AFC.
12	AM VSM	O	Adjust AM SD sensitivity.	27	AM RF	I	AM RF signal input.
13	MUTE	I/O	When the signal of IF REQ of IC121(LC72131) appear, the signal of FM/AM IF output. //Muting control input.	28	REG	O	Register value between pin 26 and pin28 besides the frequency width of the input signal.
14	FM/AM	I	Change over the FM/AM input. "H" :FM, "L" : AM	29	AM OSC	—	This is a terminal of AM Local oscillation circuit.
15	MONO/ST	O	Stereo : "H", Mono: "L"	30	OSC BUFFER	O	AM Local oscillation Signal output.

■ LC72136N (IC121) : PLL Frequency Synthesizer

1. Pin layout



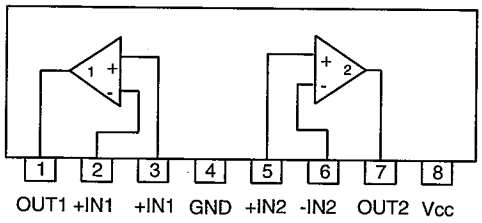
2. Block diagram



3. Pin function

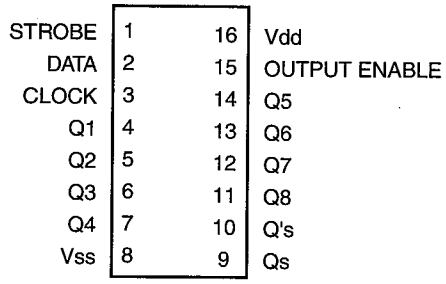
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75kHz)	12	IFIN	I	IF counter signal input
2	$\overline{FM}$/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14		-	Not use
4	DI	I	Input for receive the serial data from controller	15	AMIN	I	AM Local OSC signal output
5	CLOCK	I	Sync signal input use	16	FMIN	I	FM Local OSC signal input
6	DO	O	Data output for Controller Output port	17	VCC	-	Power suplly(VDD=4.5-5.5V) When power ON:Reset circuit move
7	FM/ST/VCO	O	"Low": MW mode	18	PD	O	PLL charge pump output(H: Local OSC frequency Height than Reference frequency. L: Low Agreement: Height impedance)
8	$\overline{AM}$/FM	O	Open state after the power on reset	19	LPFIN	I	Input for active lowpassfilter of PLL
9	LW	I/O	Input/output port	20	LPFOUT	O	Output for active lowpassfilter of PLL
10	MW	I/O	Input/output port	21	GND	-	Connected to GND
11	SDIN	I/O	Data input/output	22	$\overline{XT}$	I	X'tal oscillator(75KHz)

■ BA15218N (IC342/IC343/IC391/IC453IC362/IC363)
: Dual Ope. Amp.

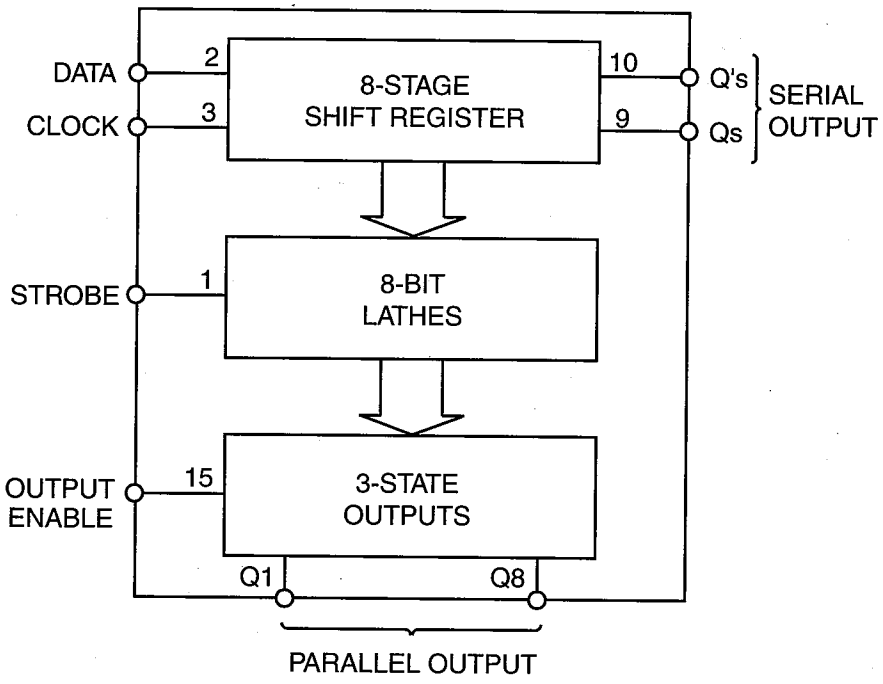


■ BU4094BCF-X(IC304,IC303):Serial to parallel port extension

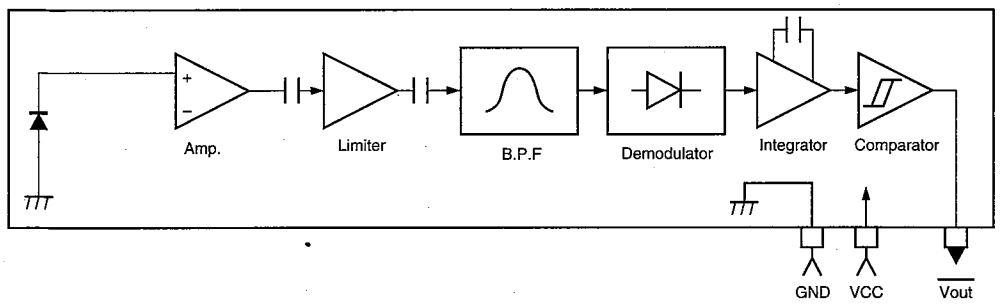
1.Pin layout



2.Block diagram

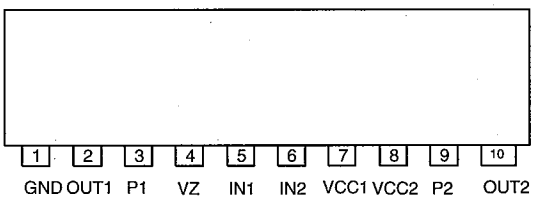


■ GP1U271X (IC701) : Receiver for remote



■ LB1641 (IC501) : DC Motor Driver

1. Pin Layout

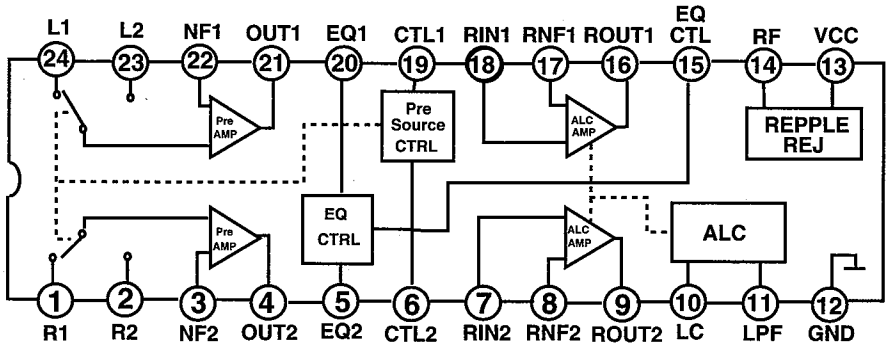


2. Pin Functions

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

■ AN7345(IC302) PB/REC AMP

1. Block diagram

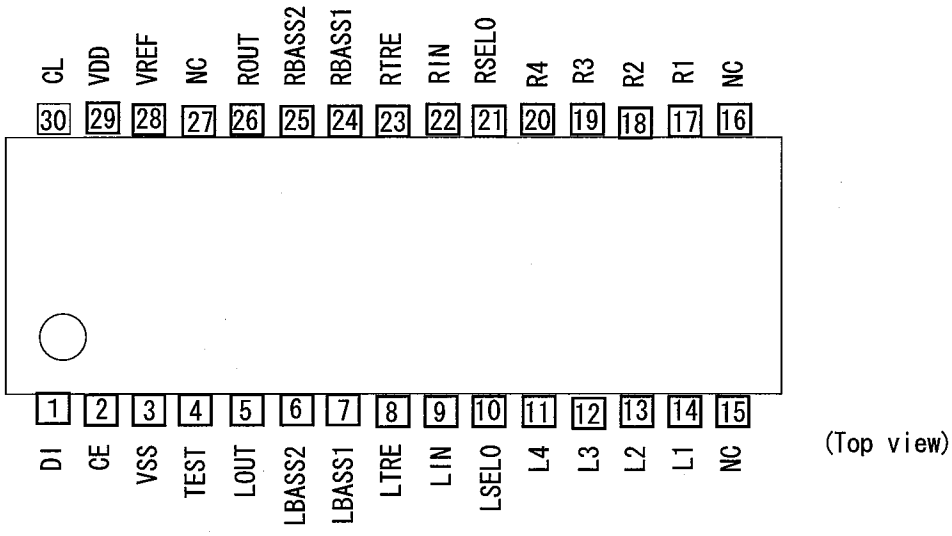


2. Pin Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	**R1**	I	**Playback amplifier input**	13	**Vcc**	I	Power supply
2	**R2**	I	**Playback amplifier input**	14	RF	I	Repple filter
3	**NF2**	I	**Playback amplifier negative feedback**	15	EQCTL	I	EQ control
4	**OUT2**	O	**Playback amplifier output**	16	ROUT 1	O	Recording amplifier output
5	**EQ2**	I	**Equlaizer**	17	RNF1	I	Recording amplifier negative feedback
6	**CTL2**	I	**Pre Amplifier input swithing time constant**	18	RIN1	I	Recording amplifier input
7	**RIN2**	I	**Recording amplifier input**	19	CTL1	I	Pre amplifier input swithing control
8	**RNF2**	I	**Recording amplifier negative feedback**	20	EQ1	I	Equlayzer
9	**ROUT2**	O	**Recording amplifier output**	21	OUT1	O	Playback amplifier output
10	**LC**	I	**ALC low cut**	22	NF1	I	Playback amplifier negative feedback
11	**LPF**	I	**ALC low pass filter**	23	L2	I	Playback amplifier input
12	**GND**	I	—	24	L1	I	Playback amplifier input

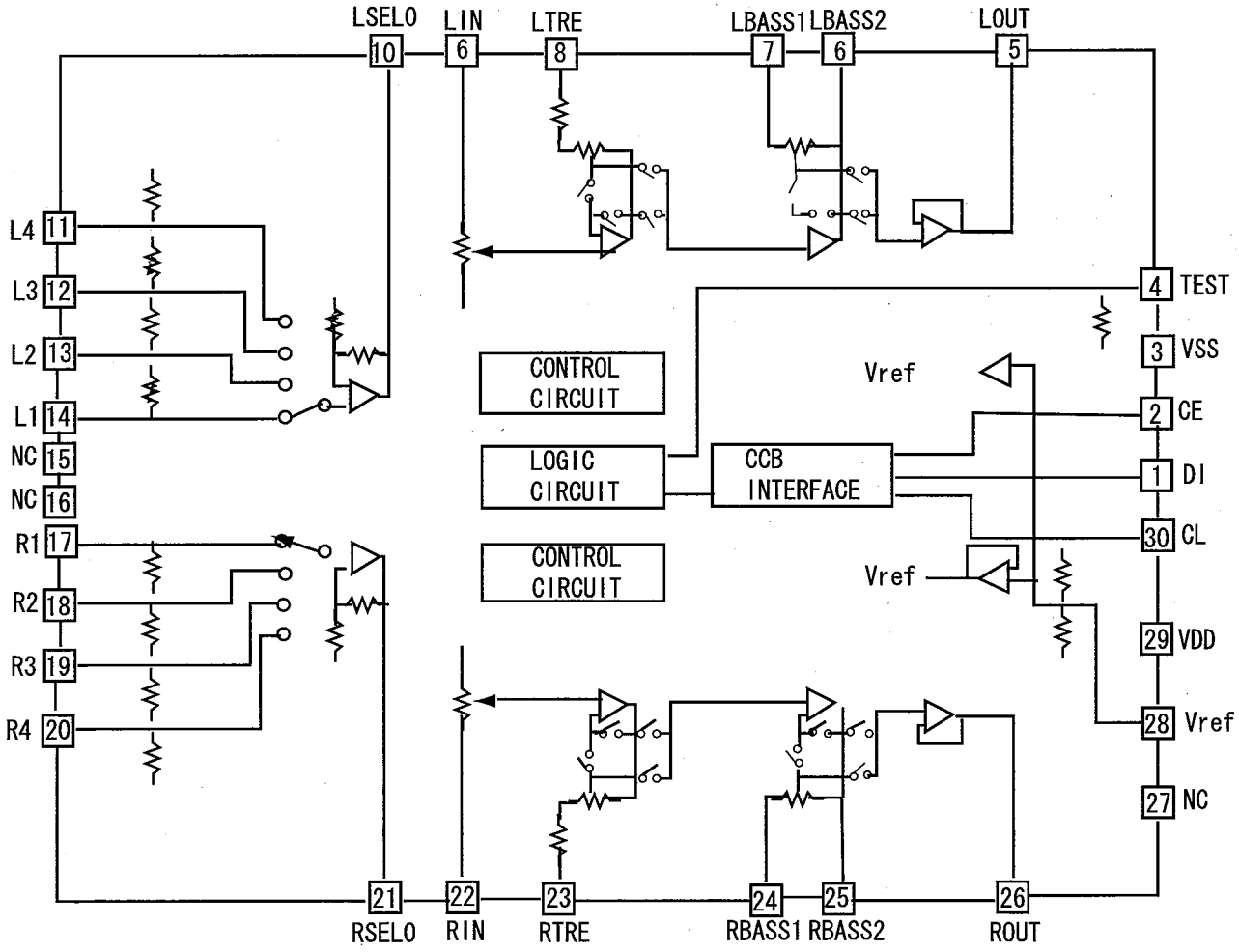
■ LC75342

1. Pin assignment



(Top view)

2. Block

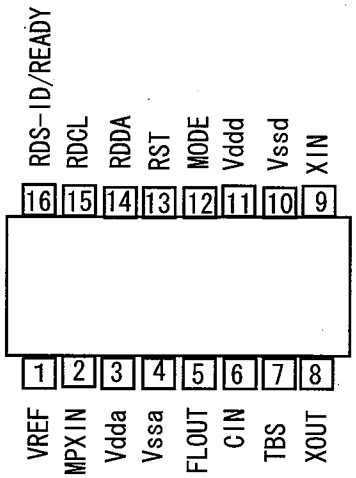


3. Pin function

Pin No.	symbol	I/O	Function
1	D1	I	Serial data input pin for control
2	CE	I	Chip enable pin
3	Vss	--	Ground
4	TEST	I	TEST pin for electronic volume control
5	LOUT	O	Volume+equalizer output
6	LBASS2	O	Bas-band filter comprising capacitor and resistor connection
7	LBASS1	I	Bas-band filter comprising capacitor and resistor connection
8	LTRE	I	Capacitor connection pin comprising treble band filter
9	LIN	I	Volume+equalizer intput
10	LSEL0	O	Input selector output pin
11	L4	I	Input signal pin
12	L3	I	Input signal pin
13	L2	I	Input signal pin
14	L1	I	Input signal pin
15	NC	--	No connect
16	NC	--	No connect
17	R1	I	Input signal pin
18	R2	I	Input signal pin
19	R3	I	Input signal pin
20	R4	I	Input signal pin
21	RSEL0	O	Input selector output pin
22	RIN	I	Volume+equalizer intput
23	RTRE	I	Capacitor connection pin comprising treble band filter
24	RBASS1	I	Bas-band filter comprising capacitor and resistor connection
25	RBASS2	O	Bas-band filter comprising capacitor and resistor connection
26	ROUT	O	Volume+equalizer output
27	NC	--	No connect
28	Vref	O	Analog ground
29	VDD	I	Poer Supply
30	CL	I	Clock input

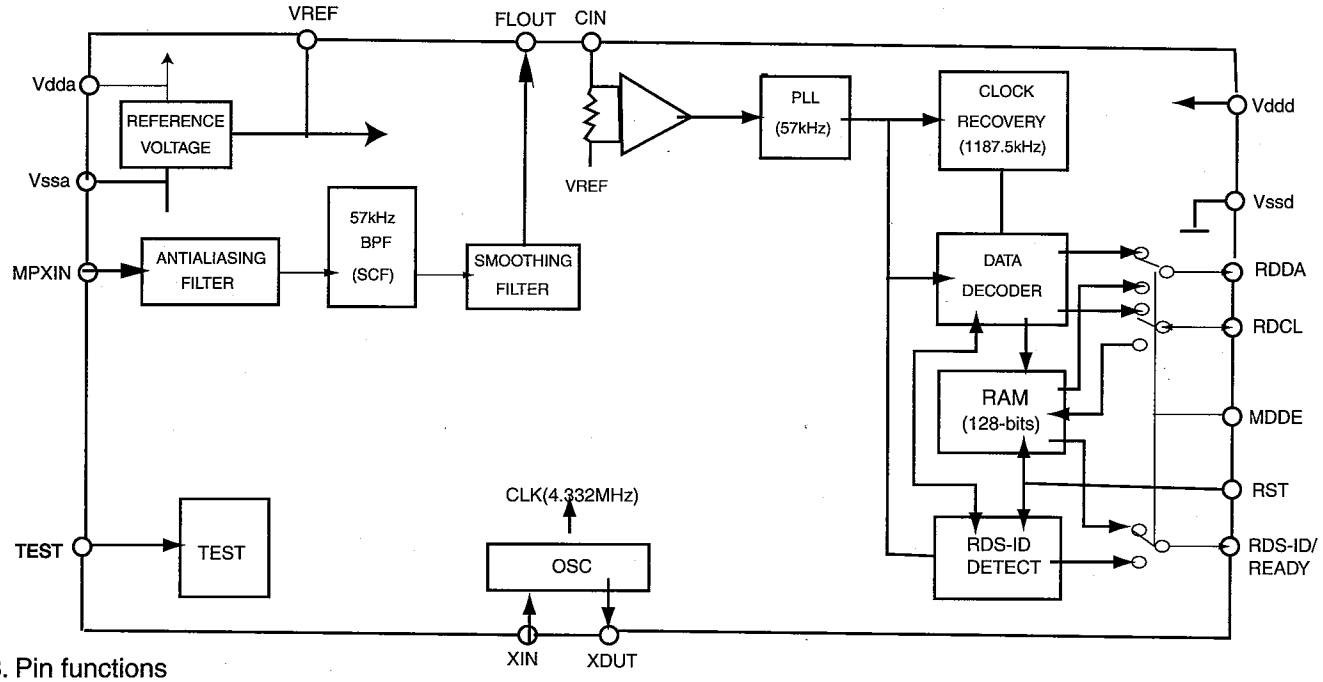
■ LC72723

1. Pin Assignment



Top View

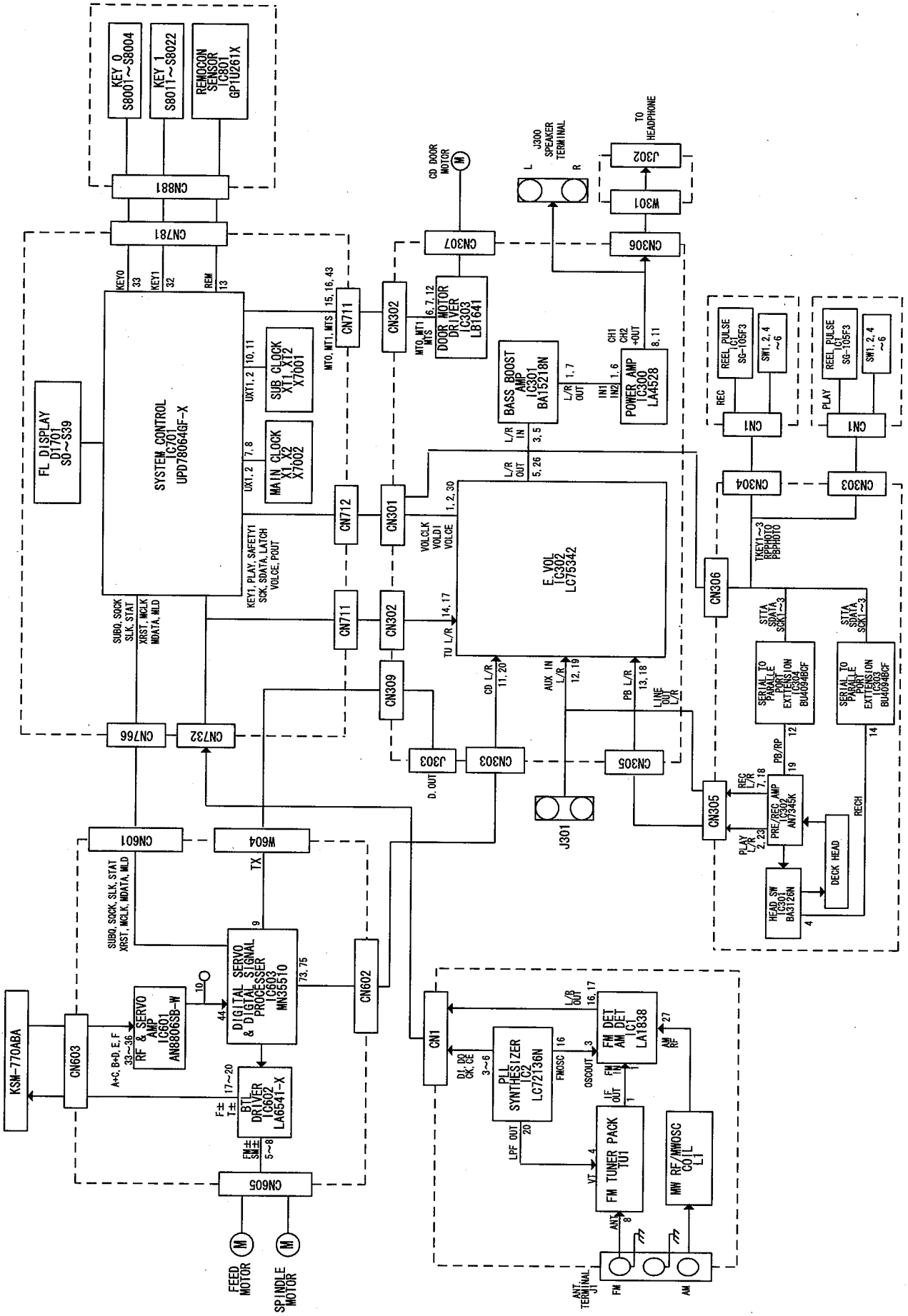
2. Block diagram



3. Pin functions

Pin No.	Symbol	I/O	Function
1	VREF	O	Reference voltage output (Vdda/2)
2	MPXIN	I	Baseband (multiplexed) signal input
3	Vdda	—	Analog power supply (+5V)
4	Vssa	—	Analog ground
5	FLOUT	O	Subcarrier input (filter output)
6	CIN	I	Subcarrier input (comparator input)
7	TEST	I	Test input
8	XOUT	O	Crystal oscillator output (4.332MHz)
9	XIN	I	Crystal oscillator input (exeternal reference input)
10	Vssd	—	Digtal ground
11	Vddd	—	Digtal power supply
12	MODE	I	Read mode setting (0:master,1:slave)
13	RST	I	RDS-ID/RAM reset (positive polarity)
14	RDDA	O	RDS data output
15	RDCL	I/O	RDS clock output (master mode)/RDS clock input (slave mode)
16	RDS-ID READY	O	RDS-ID/READY output (negative polarity)

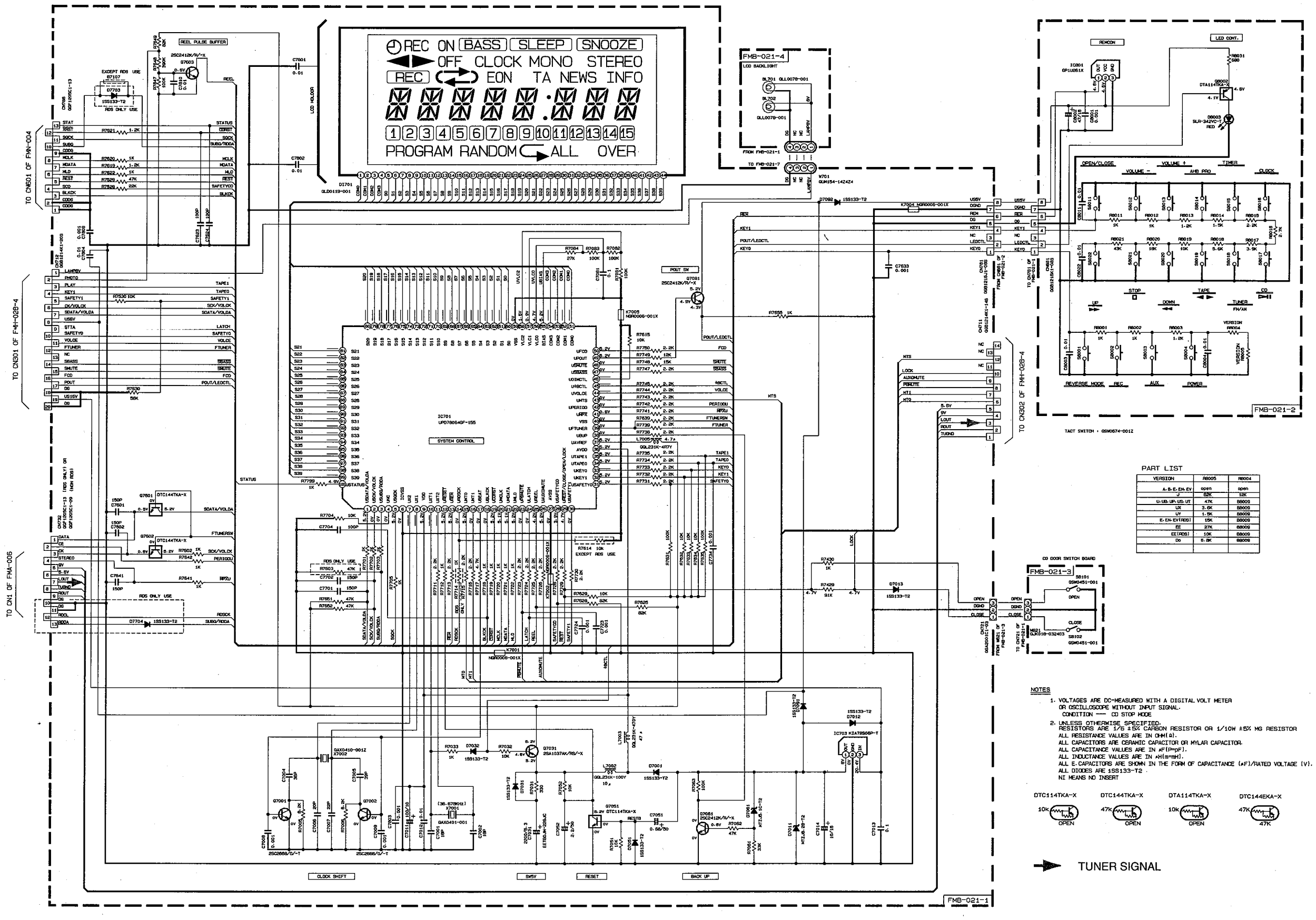
Block diagram



<<MEMO>>

Standard schematic diagrams

■ CPU & LCD driver circuit (FS-V10)



PART LIST

VERSION	R8005	R8004
A-B-E-EN-EV	open	open
J	68K	18K
U-UB-UP-US-UT	47K	R8005
UX	3.6K	R8005
UY	1.5K	R8005
E-EN-EV(RDS)	15K	R8005
EE	27K	R8005
EE(RDS)	10K	R8005
De	8.8K	R8005

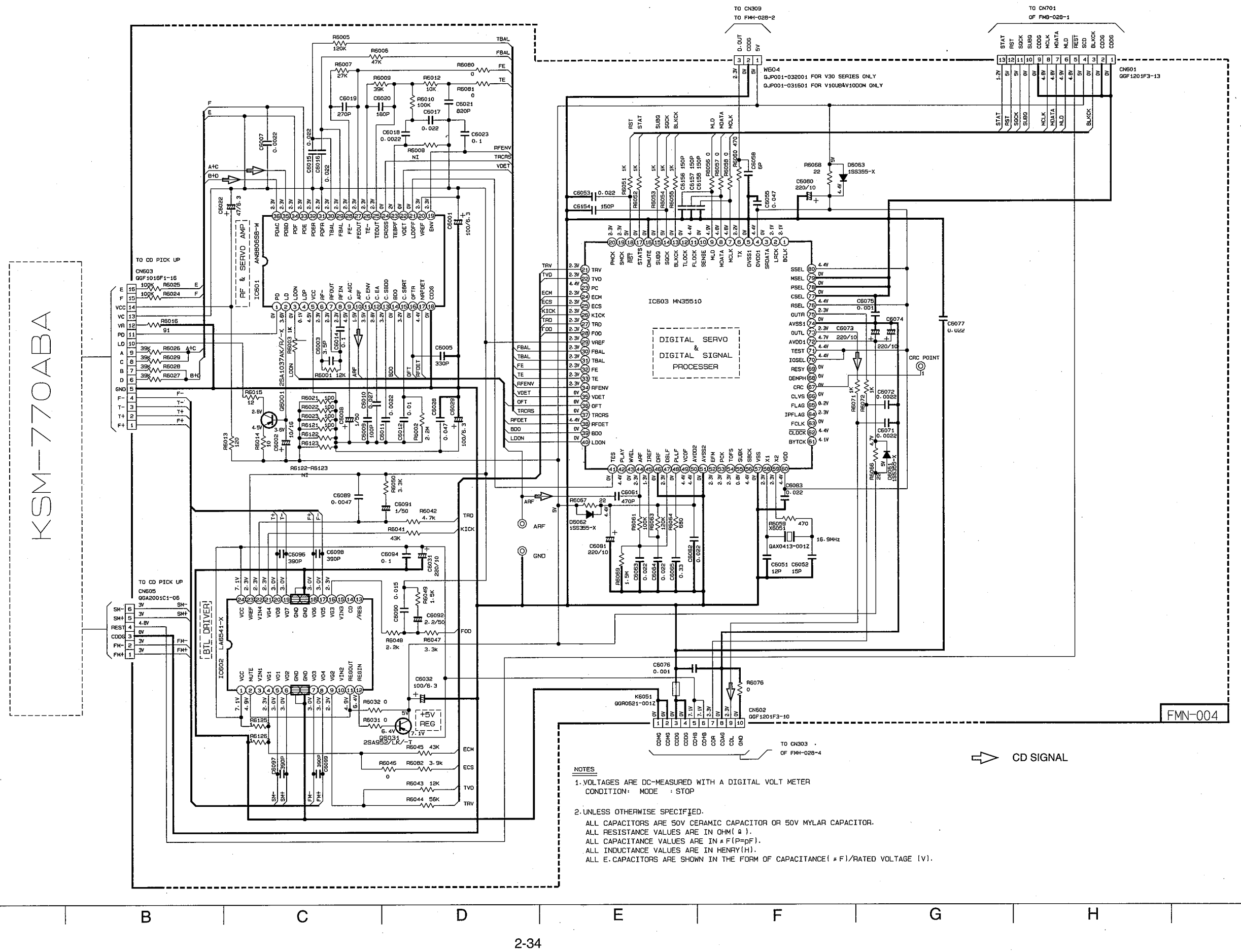
NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION —— CD STOP MODE
2. UNLESS OTHERWISE SPECIFIED.
   RESISTORS ARE 1/6 ±5% CARBON RESISTOR OR 1/10W ±5% MG RESISTOR
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(m=pF).
   ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133-T2 .
   NI MEANS NO INSERT

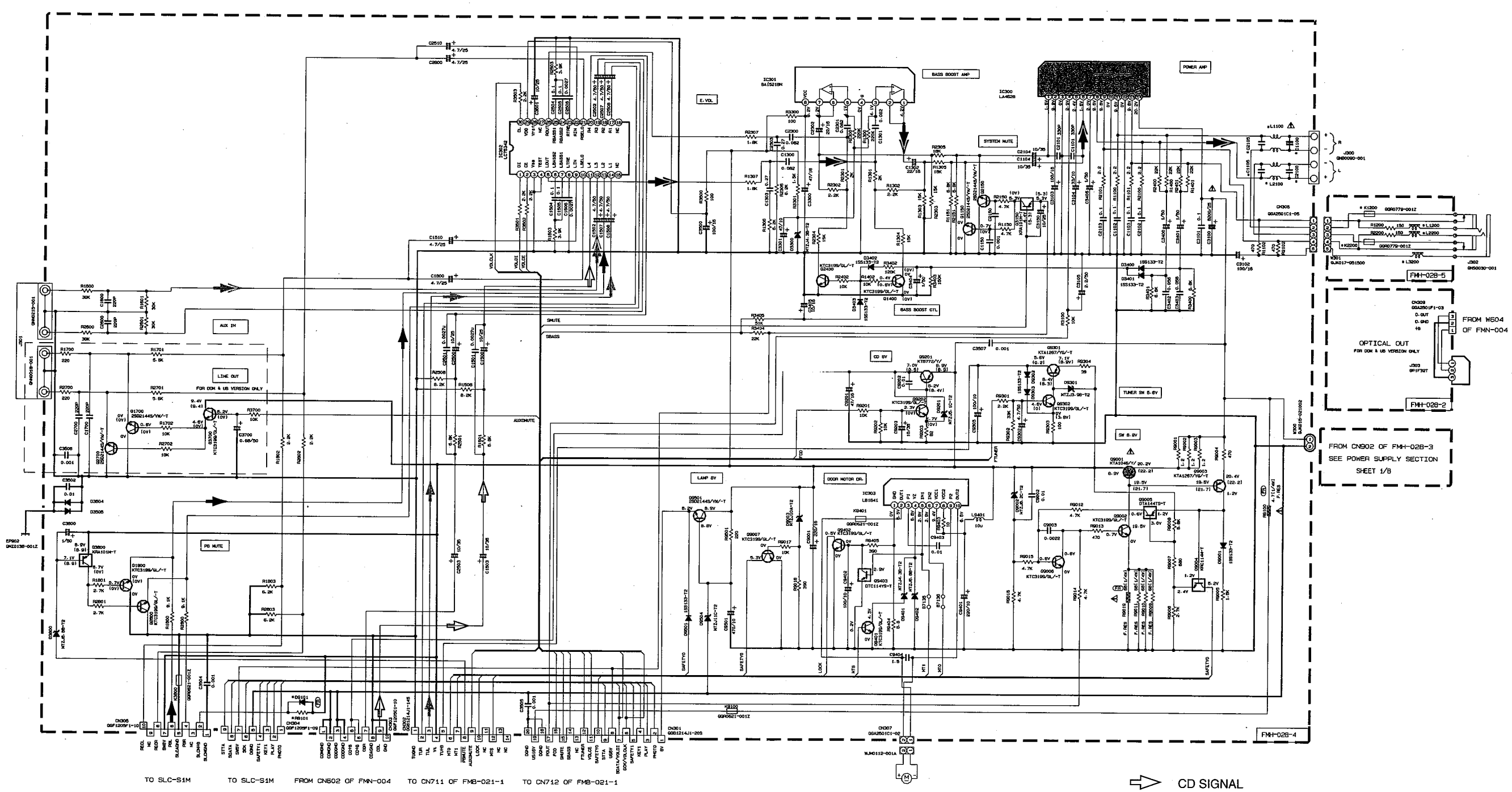
DTC114TKA-X 10K OPEN
DTC144TKA-X 47K OPEN
DTA114TKA-X 10K OPEN
DTC144EKA-X 47K 47K

TUNER SIGNAL

■ CD servo circuit (FS-V10)



■ Power amplifier circuit (FS-V10)



* PART LIST

MODEL	PART / VERSION	L1200/2200/3200	K1200/2200	C1105/2105	L1100	L2100	C1100/2100	D9101	R9101
	E/EE/EH/EV/A	90L231K-470Y	0QR0779-001Z	220p	0QR0797-001	0QR0797-001	0.0033u	NONE	S-SIL(4W) F.RES
	DOM	87128/7130/7131	87128/7132	NONE	87208/7209	87211/7212	NONE	1SR35-400A-TS	NONE
	J/C	87128/7130/7131	87128/7132	NONE	87208/7209	87211/7212	NONE	1SR35-400A-TS	NONE
	U/UB/UB/AT/AE/UK/AU	87128/7130/7131	87128/7132	NONE	87208/7209	87211/7212	NONE	1SR35-400A-TS	NONE
	UP	87128/7130/7131	87128/7132	NONE	87208/7209	87211/7212	NONE	1SR35-400A-TS	NONE

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

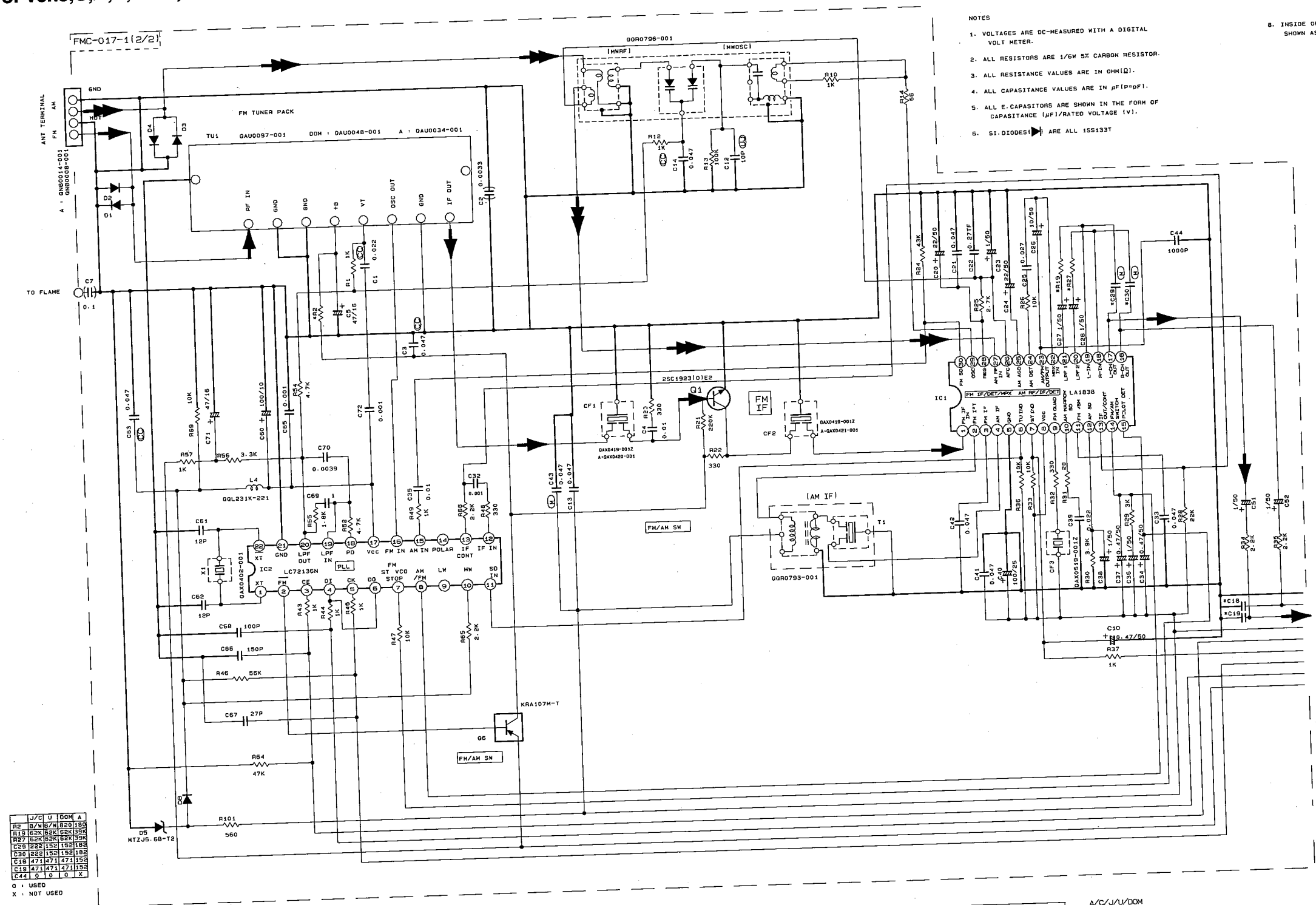
- CD SIGNAL
- TAPE P. B. SIGNAL
- TUNER SIGNAL
- AUX IN SIGNAL
- MAIN SIGNAL

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION —— CD STOP MODE
   INSIDE BRACKET VALUES ARE OTHER FUNCTIONS
2. UNLESS OTHERWISE SPECIFIED · RESISTORS ARE 1/8W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN ±P(=pF).
   ALL INDUCTANCE VALUES ARE IN ±H(=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (±F)/RATED VOLTAGE (V).
   ALL D100ESIDev. Name:1SS133-T2

KRC114M-T: OPEN
KRA101M-T: 4.7K
DTA144TB-T: OPEN

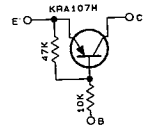
■ Tuner circuit (For Ver.J,C,A,U,DOM)



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
4. ALL CAPASITANCE VALUES ARE IN μF(P=pF).
5. ALL E.CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (μF)/RATED VOLTAGE (V).
6. SI.DIODES ▶| ARE ALL 1SS133T

8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.



	J/C	U	DOM	A
R2	B/W	B/W	B2O	180
R19	62K	62K	62K	39K
R27	62K	62K	62K	39K
C26	222	152	152	102
C30	222	152	152	102
C18	471	471	471	152
C19	471	471	471	152
C44	0	10	0	X

O : USED
X : NOT USED

	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC1	FM NO SIGNAL	3.5	9.1	3.5	3.5	0.4	7.0	6.4	9.1	0	1.3	0.3	0.5	0.8	8	8	4.3	4.3	4.3	4.3	3.2	3.2	2.6	3.5	0	0	3.4	3.4	3.6	3.6	2.3
	FM 60DB STEREO	3.5	9.1	3.5	3.5	0	0	0.2	9.1	2.3	1.3	4.3	0	0.8	8	8.1	4.3	4.3	4.3	4.3	3.2	3.2	2.8	3.1	0	0	3.6	3.6	3.6	3.6	2.3
	AM NO SIGNAL	3.5	9.1	3.5	3.5	0	9.1	6.4	9.1	2.7	1.3	0	0	0.8	0.1	5.6	4.2	4.2	4.2	4.2	3.2	3.2	2.8	2.9	0.6	0.5	3.5	3.5	3.5	3.5	2.1
IC2	FM NO SIGNAL	2.4	0	0	5.6	4.9	5.6	8	8	3.6	3.8	8.4	0	0	0	0	2.4	4.9	0.7	0.7	7.2	0	2.6								

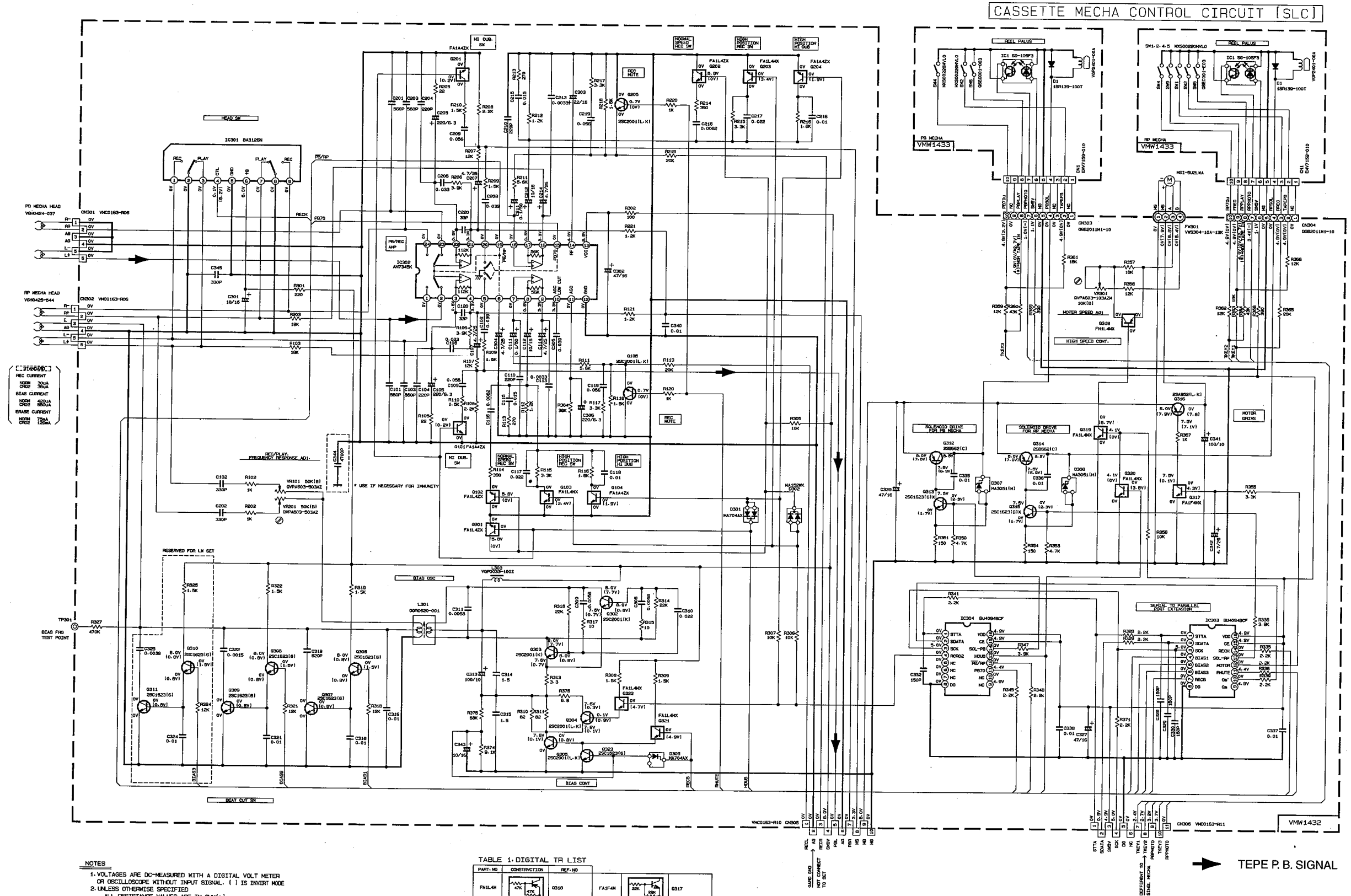
Tr NO.	Q1			Q5					
PIN NO.	E	C	B	E	C	B			
FM 87.5MHz NO SIGNAL	0	7.4	0.8	8.4	8.3	0			
AM 522KHz NO SIGNAL	0	0	0	8.5	0	8.4			
Tr NO.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	3.5	3.5	0.3	0	0	0.7	0	0	0.7
AM 144KHz NO SIGNAL	3.5	3.5	3.5	0	0	0.1	0	0	0.1

A/C/J/U/DOM

MODEL CA-MXJ50 SHEET 4/11
MX-J56
MX-J50

▶ FM/TUNER MAIN SIGNAL
▶ AM SIGNAL

■ Cassette mecha control circuit (FS-V10)



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. ( ] IS INVERT MODE
2. UNLESS OTHERWISE SPECIFIED
   - ALL RESISTANCE VALUES ARE IN OHM(Ω).
   - ALL CAPACITORS ARE CERAMIC CAPACITOR
   - ALL CAPACITANCE VALUES ARE IN μF(PmpF).
   - ALL INDUCTANCE VALUES ARE IN μH(mmH).
   - ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   - 5P PLYPROPYLENE CAPACITOR

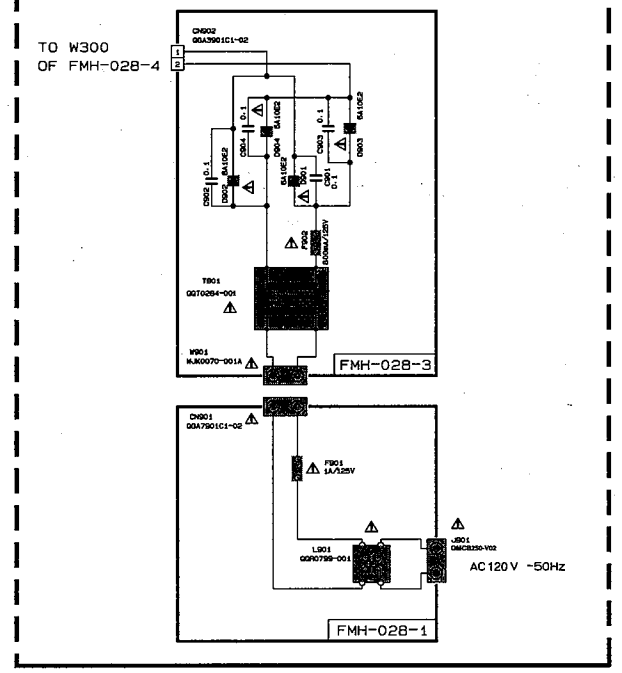
TABLE 1. DIGITAL TR LIST

PART NO	CONSTRUCTION	REF NO			
FN1L4M	47K	Q316	FA1F4M	22K	Q317
FA1A4Z	10K	Q101/Q201 Q104/Q204	FA1L4M	22K 47K	Q103/Q203 Q319 Q320/Q321/Q322
FA1L4Z	47K	Q102/Q202 Q301			

■ Power supply circuit (FS-V10)

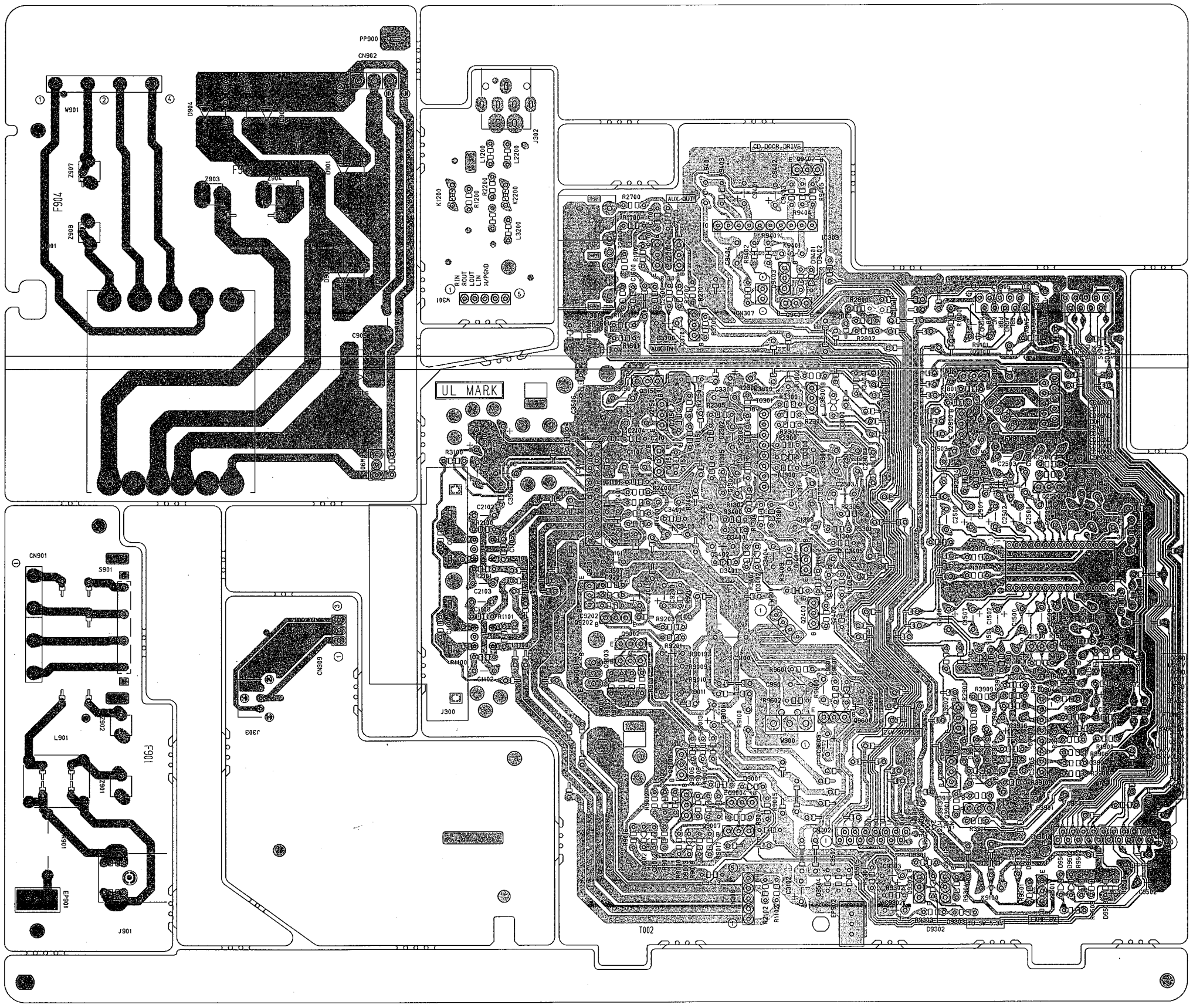
POWER SUPPLY BLOCK

J/C

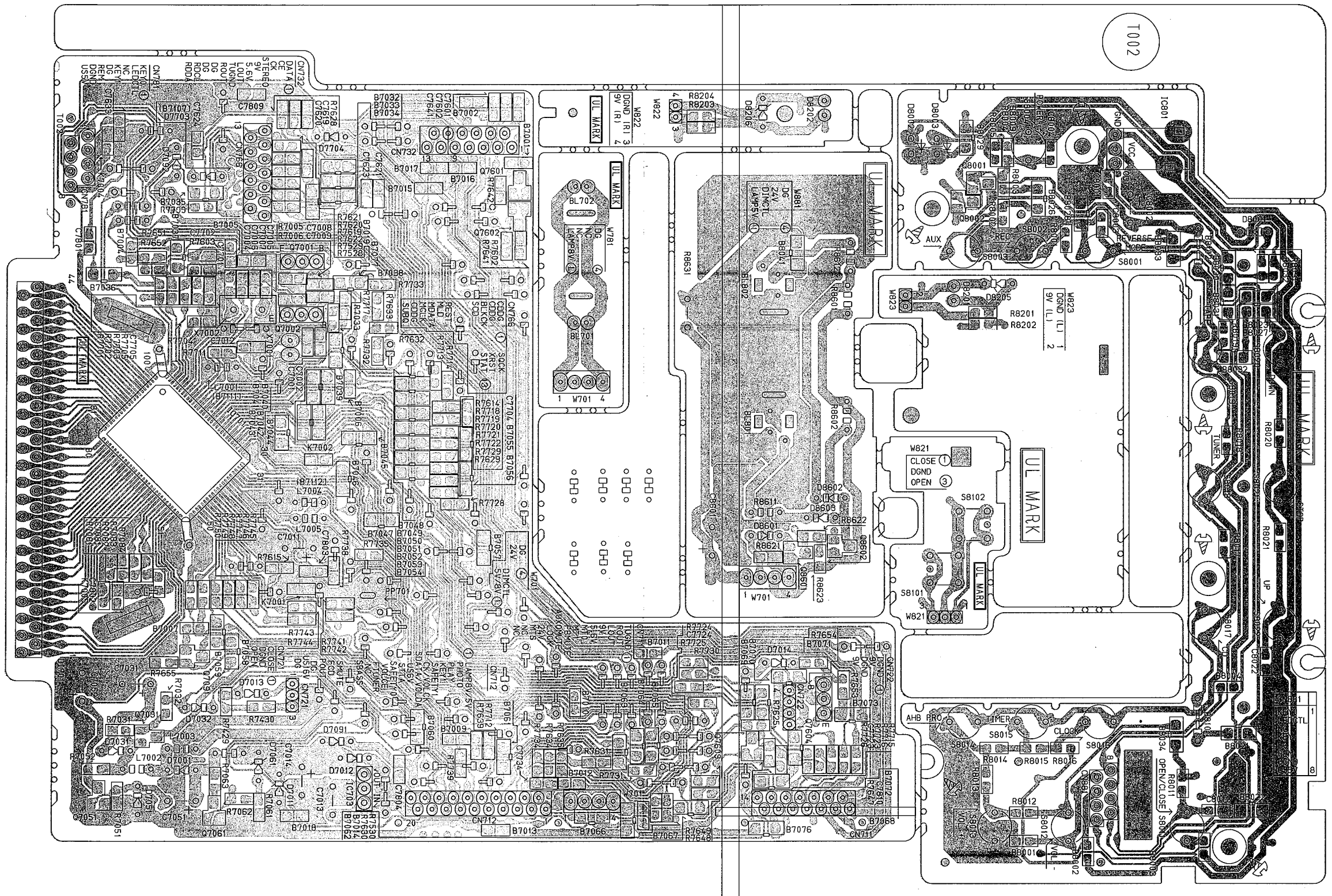


Printed circuit boards

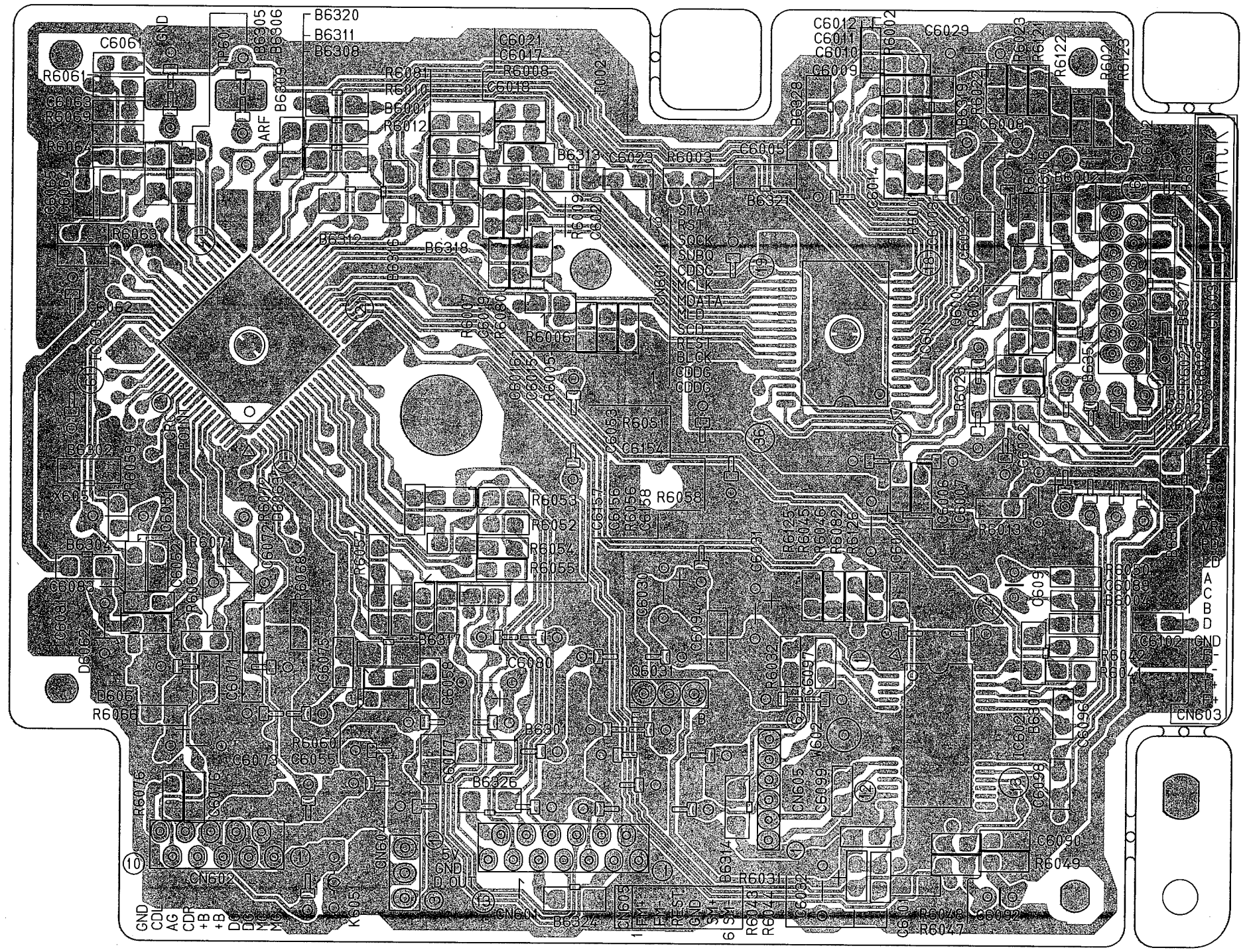
■ Main board



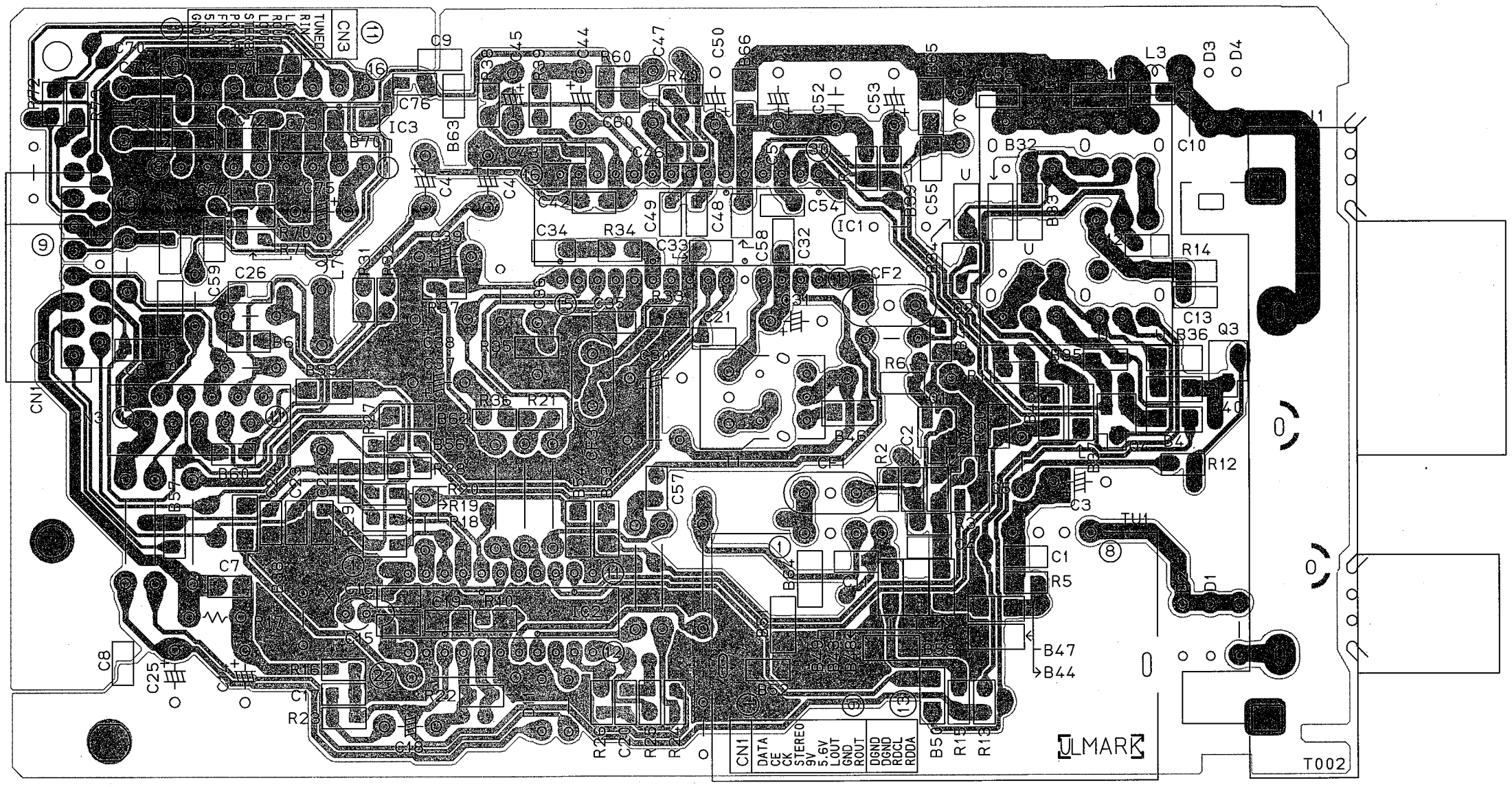
■ Micon P. C. board



■CD board


B6320
B6311
B6308
C6061
R6061
R6081
R6010
B6001
R6012
C6021
C6017
R6008
C6013
C6012
C6011
C6010
C6009
C6029
R6002
B6328
B6313
C6023
R6003
C6005
B6321
STAT
RST
SOCK
SUBQ
CDDC
MCLK
MDATA
XLT
SCD
BCK
BLCK
CDDC
CDDC
I2C
B6312
B6318
R6051
C6154
R6053
R6052
R6054
R6055
R6058
C6003
C6004
B6301
B6302
B6303
B6304
C6080
B6307
B6325
B6314
R6031
R6048
R6047
C6092
C6090
R6049
CN603
CN601
CN602
CN502
GND
CDL
AG
CDR
+B
+B
D
D
M
M
K
5V
GND
D
D
SM
SM
R
R
GND
A
C
B
D
GND
L-
L+
R-
R+

■ **Tuner P. W. B**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TUNER
CN1
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CE
CK
STEREO
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5.6V
LOUT
GND
ROUT
DGND
DGND
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RDDA
IC3
IC1
CF1
CF2
Q3
L3
L1
D3
D4
D1
T002
C9
C10
C13
C26
C34
R34
R35
R21
R14
R12
R6
C1
C2
C3
C7
C8
C25
R5
B47
B44
TU1

PARTS LIST

[FS-V10]

* All printed circuit boards and its assemblies are not available as service parts.

Area Suffix	
J	U.S.A.

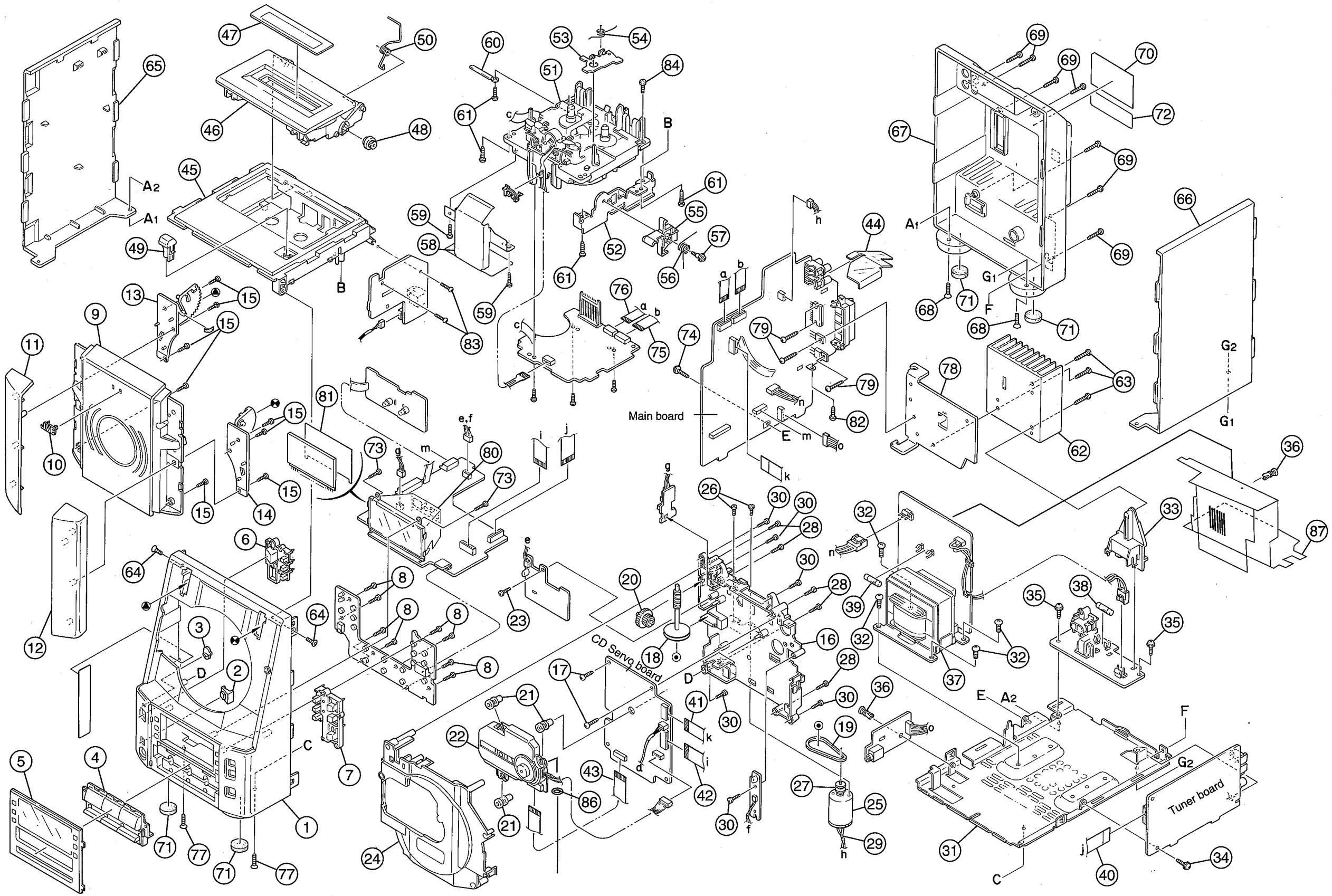
- Contents -

Exploded view of general assembly and parts list ---------- 3- 3
Cassette mechanism assembly and parts list ---------- 3- 5
Electrical parts list ---------- 3-10
Packing materials and accessories parts list ---------- 3-20

<<MEMO>>

Exploded view of general assembly and parts list

Block No. M 1 M M



■ General assembly

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	GV10020-007A	FRONT PANEL	1		
	2	GV40067-001A	REMOTE LENS	1		
	3	GV40068-001A	STANDBY LENS	1		
	4	GV30060-003A	FRONT BUTTON AS	1	F.BTN+FUNC.BTN	
	5	GV40116-001A	FRONT LENS ASSY	1		
	6	GV30063-001A	POWER BUTTON	1		
	7	GV30064-001A	VOLUME BUTTON	1		
	8	QYSDSF2608Z	SCREW	8	SW.PWB+FR.PANEL	
	9	GV20044-010A	CD DOOR LENS	1		
	10	GV40077-001A	JVC BADGE	1		
	11	GV30065-001A	CD DOOR PLATE L	1		
	12	GV30065-002A	CD DOOR PLATE R	1		
	13	GV30066-001A	CD DOOR HOLDER	1	DOOR LEFT	
	14	GV30066-002A	CD DOOR HOLDER	1	DOOR RIGHT	
	15	QYSDSF2006M	SCREW	8	CD DOOR ASSY	
	16	GV20046-003A	CD CHASSIS	1		
	17	QYSBSF2608Z	T.SCREW	2	CD PWB+CD CHASI	
	18	GV40072-002A	WORM PULLEY	1		
	19	GV30038-001A	BELT	1		
	20	GV40071-002A	GEAR	1		
	21	GV40070-001A	INSULATOR	3		
	22	KSM-770ABA	CD MECHA	1		
	23	QYSDSF2608Z	SCREW	1	ILM PWB L+CD CH	
	24	GV20045-001A	CD CASE	1		
	25	MXN-13FB12F	DC MOTOR ASS'Y	1		
	26	QYSPSP3004Z	SCREW	2	MOTOR+CD CHASSI	
	27	VYH7699-001SS	PULLEY	1		
	28	QYSDSF2608Z	SCREW	5	CD CHASSIS+CD C	
	29	WJM0112-001A	E-SI C WIRE C-F	1		
	30	QYSDSF2608Z	SCREW	5	CD CHASSIS+F.PA	
	31	GV10021-001A	BOTTOM CHASSIS	1		
	32	QYSBST4006Z	T.SCREW	1	TRANS+B.CHASSIS	
	33	GV30073-001A	JACK HOLDER	1		
	34	QYSBSTG3006Z	T.SCREW	1	TUNER PWB+B.CHA	
	35	QYSBSTG3006Z	T.SCREW	1	AC J.PWB+B.CHAS	
	36	FMYH4004-001	PLASTIC RIVET	2	H.P PWB+B.CHASS	
⚠	37	QQT0284-001	POWER TRANSF	1		
⚠	38	QMF51U1-1R0	FUSE	1	(F901)	
⚠	39	QMF51U1-8R0-J1	FUSE	1	(F902)	
	40	QUQ412-0908DJ	FFC WIRE	1	TU TO FMB	
	41	QUQ412-1022CJ	FFC WIRE	1	CD TO MAIN	
	42	QUQ412-1320CJ	FFC WIRE	1	CD TO FMB	
	43	QUQ110-1607BJ	FFC WIRE	1	PICKUP TO CD	
	44	GV40111-001A	PROTECT SHEET	1		
	45	GV10022-002A	TOP COVER	1		
	46	GV20047-001A	CASSETTE DOOR	1		
	47	GV40074-001A	CASS DOOR LENS	1		
	48	VYH7366-001MM	GEAR	1		

■ General assembly

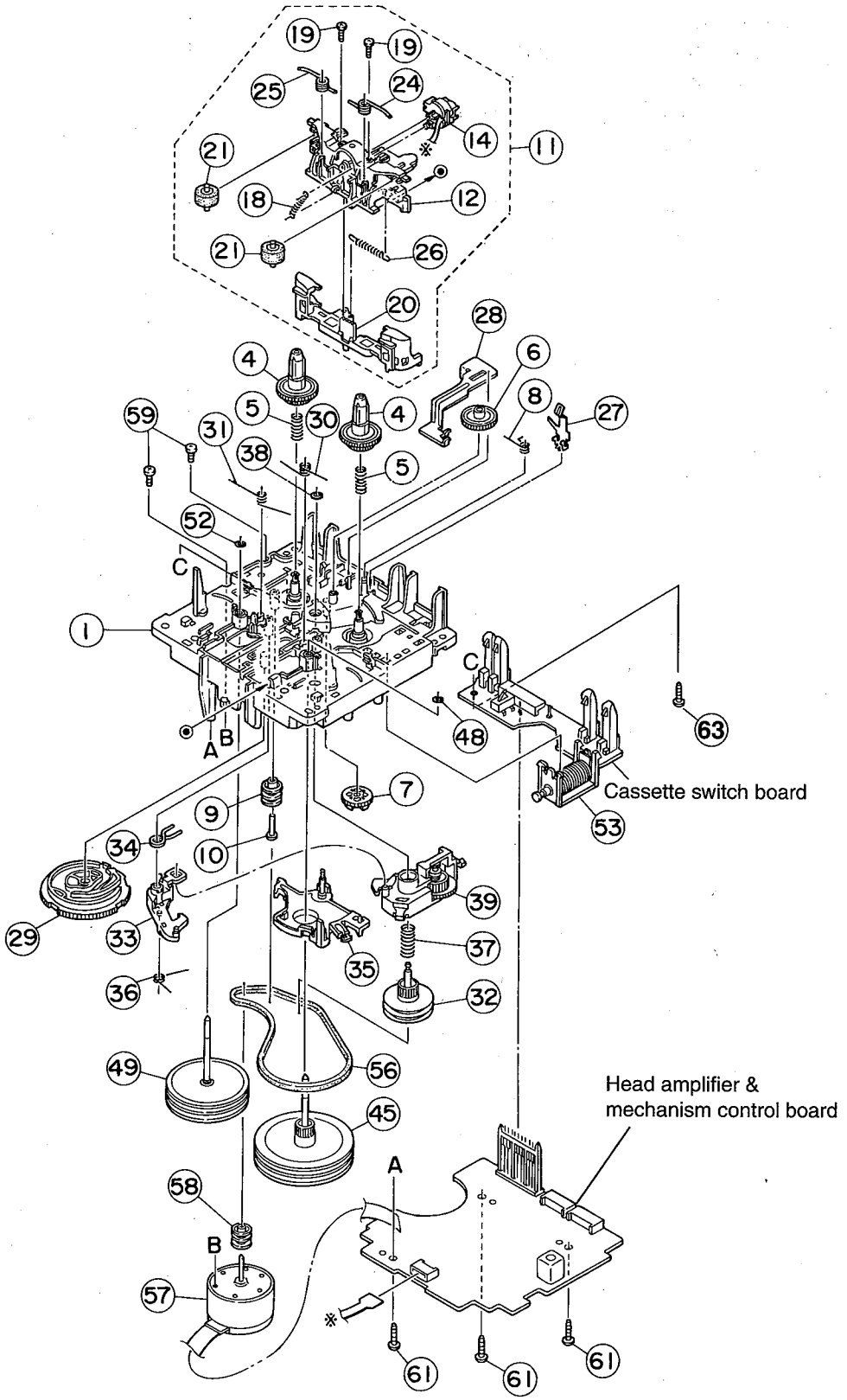
Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	49	GV40073-001A	EJECT KCNOB	1		
	50	GV40085-002A	DOOR SPRING	1		
	51	----------	CASSETTE MECH	1		
	52	VYH3965-001	SIDE BRACKET(R)	1		
	53	VKL7850-002	EJECT SAFTY(R)	1		
	54	VKW5258-002	TORSION SPRING	1		
	55	VYH8146-012	EJECT ARM(R)	1		
	56	VKW3006-230	TORSION SPRING	1		
	57	VKZ4341-004	SPECIAL SCREW	1		
	58	GV30071-001A	HEAD SHIELD	1		
	59	QYSBSF2606Z	SCREW	2	H.SHIELD+SLC.ME	
	60	VKZ4001-110S	WIRE HOLDER	1		
	61	QYSBSF3010Z	SCREW	4	SLC + TOP COVER	
	62	GV30068-001A	HEAT SINK	1		
	63	QYSPSF3010Z	TAP SCREW	3	H.SINK+IC HOLDE	
	64	QYSSSF3008Z	SCREW	2	T.COVER+F.PANEL	
	65	GV20048-003A	SIDE PANEL(L)	1		
	66	GV20048-004A	SIDE PANEL(R)	1		
	67	GV10023-014A	REAR PANEL	1		
	68	QYSSST3010Z	SCREW	2		
	69	QYSBSF3010N	TAP SCREW	6	REAR PANEL	
	70	GV30099-009A	NAME PLATE	1		
	71	GV40091-001A	FOOT	4		
	72	VND4118-004	CAUTION LABEL	1		
	73	QYSDSF2608Z	SCREW	2	L.CASE+F.PANEL	
	74	QYSBSTG3006Z	T.SCREW	1	M.BRD+B.CHASSIS	
	75	QUQ412-1024CJ	FFC WIRE	1	SLC TO MAIN	
	76	QUQ412-0924CJ	FFC WIRE	1	SLC TO MAIN	
	77	QYSSST3010Z	SCREW	2	F.PANEL+B.CHASS	
	78	GV30069-001A	I.C HOLDER	1		
	79	QYSBSF3010N	TAPPING SCREW	1		
	80	GV30070-001A	LAMP CASE	1		
	81	GV40084-001A	L.C.D.SHEET	1		
	82	QYSBSFG3008Z	T.SCREW	1	M.BOARD +IC HOL	
	83	QYSBSF2606Z	T.SCREW	1		
	84	QYSBSG3008Z	T.SCREW	1	SLC+SIDE BKT.	
	86	GV40122-002A	FOOT SPACER	1	STICK AT CD MEC	
	87	GV30121-001A	PROTECT SHEET	1		

Cassette mechanism assembly and parts list

Block No. M 2 M M

SLC-S1YPM



■ Parts list (Cassette mechanism)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	VKS1165-00G	CHASSIS B.ASS'Y	1		
	4	VKS2274-002	REEL GEAR	2		
	5	VKW5286-002	B.T. SPRING	2		
	6	VKS5559-001	PLAY IDLE GEAR	1		
	7	VKS5597-00A	BUND ASS'Y	1		
	8	VKW5296-001	EARTH SPRING	1		
	9	VKR4749-003	IDLE PULLEY	1		
	10	VKH5786-003	SHAFT	1		
	11	VKS2275-00E	HEAD MOUNT ASSY	1		
	12	VKS1167-003	HEAD MOUNT BASE	1		
	14	LV41089-001A	R/P&E HEAD	1	VKS2275-00B	
	18	VKW5302-001	HEAD SPRING	1		
	19	VKZ4730-001	SPECIAL SCREW	2		
	20	VKS2277-005	DIRECTION LEVER	1		
	21	VKP4233-00A	PINCH ROL. ASSY	2		
	24	VKW5299-002	PIN ROL.SP.(R)	1		
	25	VKW5300-002	PIN ROL.SP.(L)	1		
	26	VKW5285-001	RETURN SPRING	1		
	27	VKY3149-002	CASSETTE SP.	1		
	28	VKM3906-002	PLAY SW LEVER	1		
	29	VKS1166-003	CONTROL CAM	1		
	30	VKW5279-001	HEAD BASE SP(R)	1		
	31	VKW5280-001	HEAD BASE SP(L)	1		
	32	VKS5603-00D	MAIN PULLEY ASY	1		
	33	VKS3785-001MM	FR ARM	1		
	34	VKW5284-002	SWING SPRING	1		
	35	VKS2278-003	TRIGGER ARM	1		
	36	VKW5301-001	FR SPRING	1		
	37	VKW5266-001	ELEVATOR SPRING	1		
	38	WDL214025	WASHER	1		
	39	VKS3786-00G	CLUTCH ASS'Y	1		
	45	VKF3205-00B	F.WHEEL ASSY(R)	1		
	48	WDL183425	SLIT WASHER	1		
	49	VKF3207-00B	F.WHEEL ASSY(L)	1		
	52	WDL173525-6	SLIT WASHER	1		
	53	VKZ3174-00A	DC SOLENOID	1		
	56	VKB3000-181	CAPSTAN BELT	1		
	57	MSI-5U2LWA	D.C.MOTOR ASS'Y	1		
	58	VKR4761-001	MOTOR PULLEY	1		
	59	QYSPSP2604Z	SCREW	2		
	61	QYSBSF2608Z	T.SCREW	3	FOR P.W.B.	
	63	QYSBSF2006Z	SCREW	1		

Grease point 1/3

Grease
* **EM-30L**
● **UD-24**
◆ **LEN-320M**

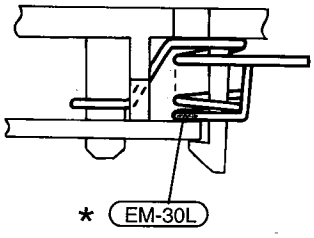


Fig.1

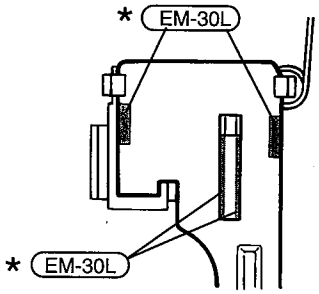
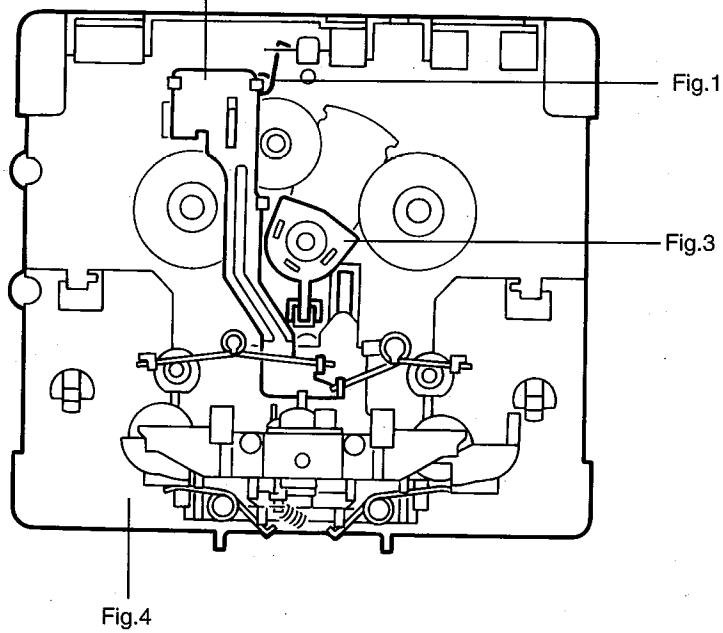


Fig.2

Fig.2



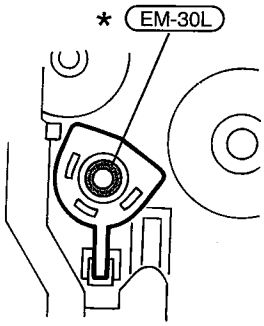


Fig.3

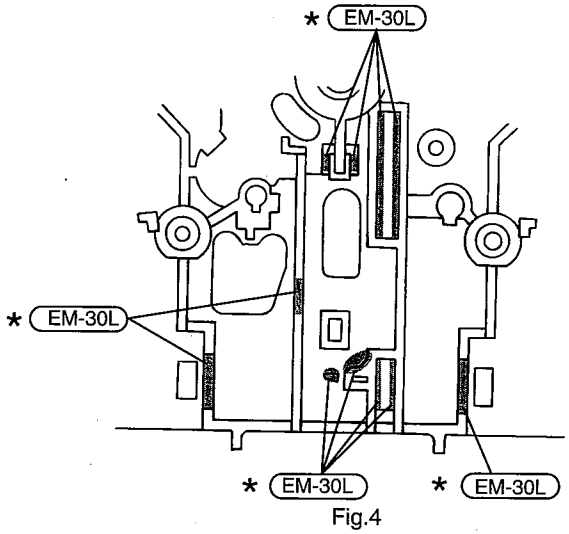


Fig.4

(Remove the Head mount Ass'y on the Chasis Base)

Grease point 2/3

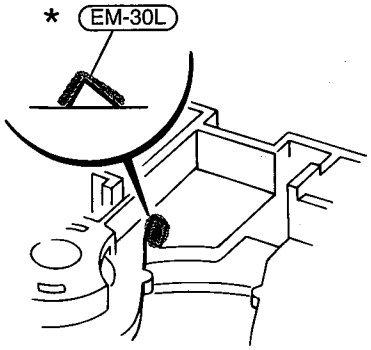


Fig.5

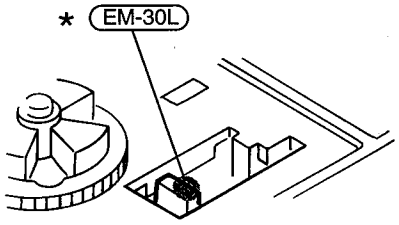
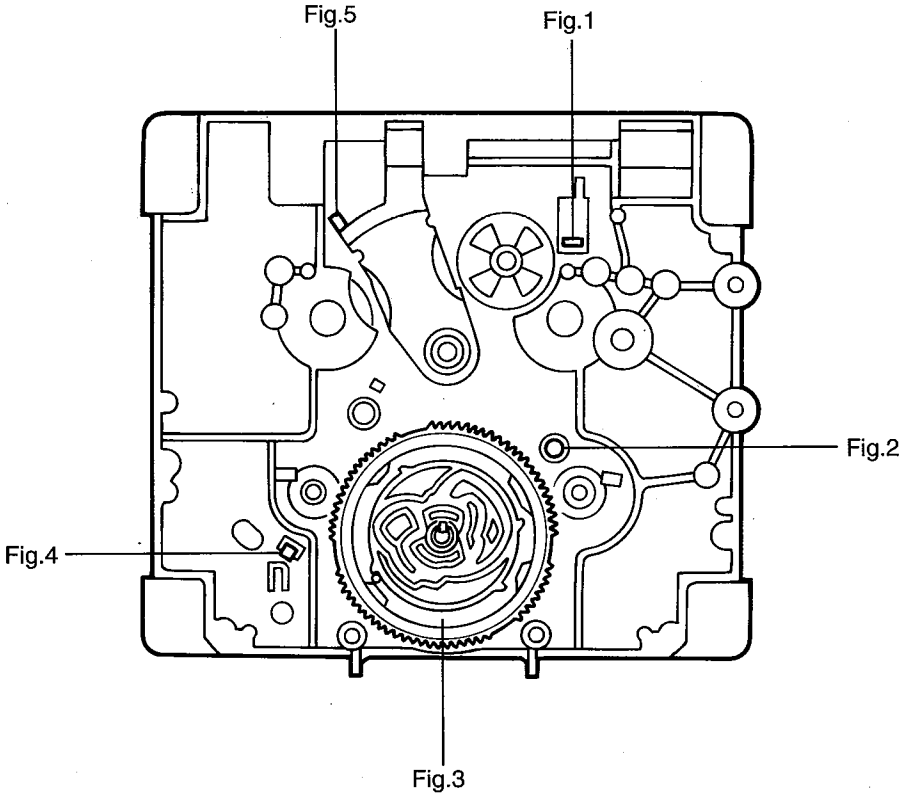


Fig.1



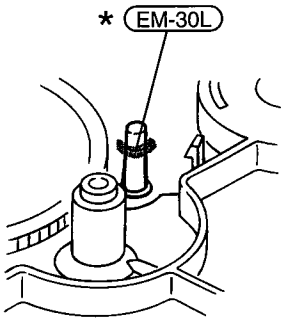


Fig.2

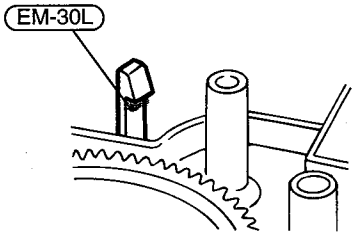
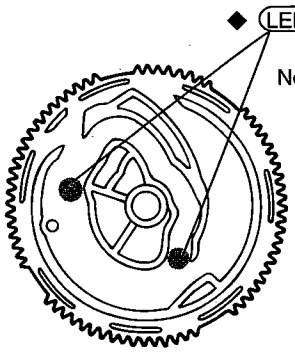


Fig.4



Note: It is a putting up of the control cam to UD-24H(Hanarl) and LEN-320M(Grease)dipping on the Control cam

Fig.3

Grease point 3/3

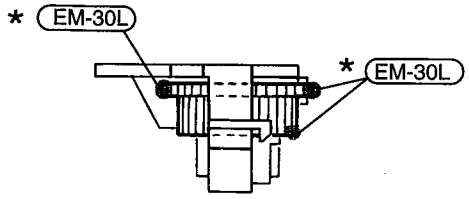


Fig.1

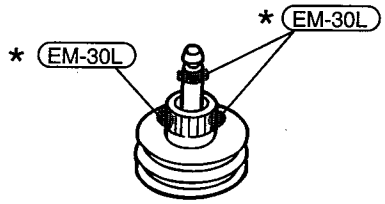
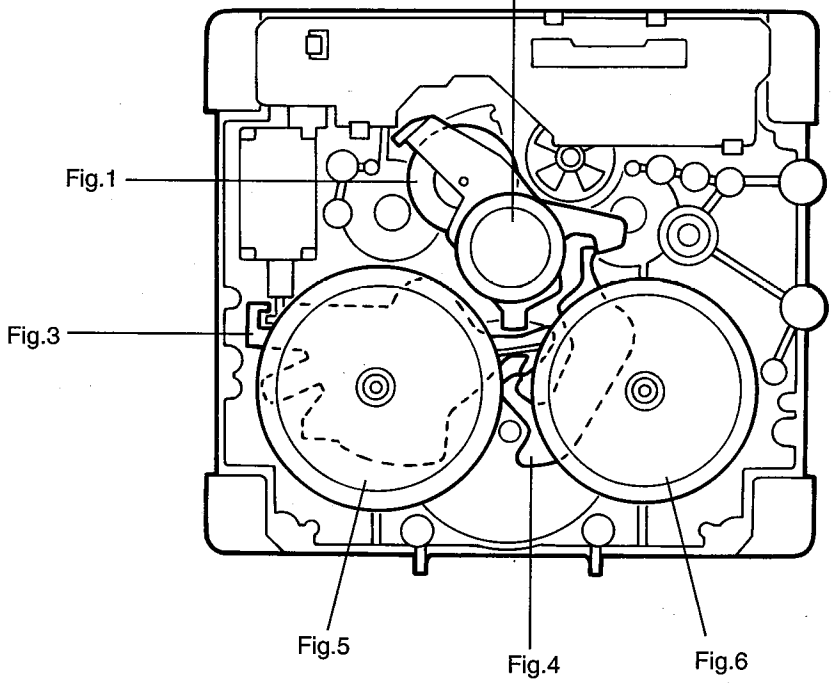


Fig.2



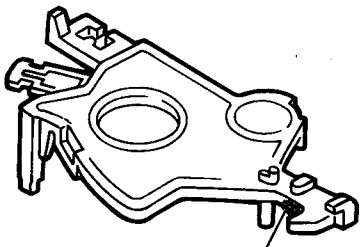
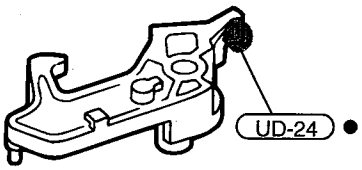


Fig.3



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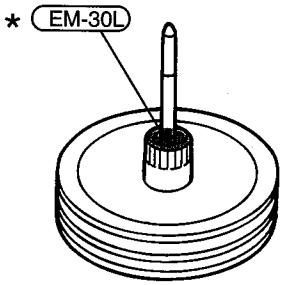


Fig.5

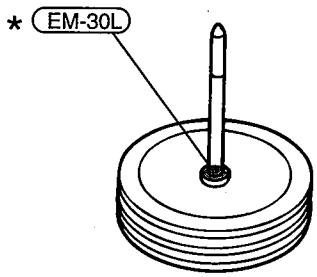


Fig.6

■ Electrical parts list (Main board)

Block No. 01

⚠	Item	Parts number	Parts name	Remarks	Area
	C 901	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C 902	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C 903	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C 904	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	CN301	QGB1214J1-20S	CONNECTOR	MICON	
	CN302	QGB1214J1-14S	CONNECTOR	MICON	
	CN303	QGF1205C1-10	CONNECTOR	CD	
	CN304	QGF1205F1-09	CONNECTOR	SLC	
	CN305	QGF1205F1-10	CONNECTOR	SLC	
	CN306	QGA2501C1-05	5P CONNECTOR	HEADPHONE	
	CN307	QGA2501C1-02	2P CONNECTOR	CD DOOR	
⚠	CN901	QGA7901C1-02	CONNECTOR		
	CN902	QGA3901C1-02	CONNECTOR		
	C1101	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C1102	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C1103	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C1104	QTE1V06-106Z	E CAPACITOR		
	C1150	QDGB1HK-102Y	C CAPACITOR		
	C1300	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C1301	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C1302	QTE1V06-106Z	E CAPACITOR		
	C1303	QFVF1HJ-334Z	TF CAPACITOR	.33MF 5% 50V	
	C1500	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C1501	QFLM1HJ-392Z	M CAPACITOR	3900PF 5% 50V	
	C1502	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1503	QTE1V06-106Z	E CAPACITOR		
	C1504	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C1505	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C1506	QFLM1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C1507	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1508	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C1600	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C1700	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C1800	QETN1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C2101	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C2102	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C2103	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C2104	QTE1V06-106Z	E CAPACITOR		
	C2150	QDGB1HK-102Y	C CAPACITOR		
	C2300	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C2301	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C2302	QTE1V06-106Z	E CAPACITOR		
	C2303	QFVF1HJ-334Z	TF CAPACITOR	.33MF 5% 50V	
	C2500	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C2501	QFLM1HJ-392Z	M CAPACITOR	3900PF 5% 50V	
	C2502	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2503	QTE1V06-106Z	E CAPACITOR		
	C2504	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C2505	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C2506	QFLM1HJ-272Z	M CAPACITOR	2700PF 5% 50V	
	C2507	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2508	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C2600	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C2700	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C2800	QETN1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
⚠	C3100	QETM1EM-828	E CAPACITOR	8200MF 20% 25V	
	C3101	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C3102	QEKC1CM-107Z	E.CAPACITOR	100MF 20% 16V	
	C3103	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C3104	QETC1AM-336Z	E CAPACITOR	33MF 20% 10V	
	C3105	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C3150	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C3300	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C3301	QETN1AM-476Z	E CAPACITOR	47MF 20% 10V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C3400	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C3401	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C3402	QFLC1HJ-563Z	TF CAPACITOR	.056MF 5% 50V	
	C3403	QFLC1HJ-563Z	TF CAPACITOR	.056MF 5% 50V	
	C3404	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C3405	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C3406	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C3500	QETN1CM-107Z	E CAPACITOR	100MF 20% 16V	
	C3501	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C3502	QDYB1CM-103Y	C.CAPACITOR		
	C3503	QDGB1HK-102Y	C CAPACITOR		
	C3504	QDGB1HK-102Y	C CAPACITOR		
	C3505	QDGB1HK-102Y	C CAPACITOR		
	C3700	QETN1HM-684Z	E CAPACITOR	.68MF 20% 50V	
	C3800	QETN1HM-105Z	E CAPACITOR	1.0MF 20% 50V	
	C9001	QETN1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C9002	QDYB1CM-103Y	C.CAPACITOR		
	C9003	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C9201	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C9202	QDYB1CM-103Y	C.CAPACITOR		
	C9203	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C9302	QEKC1HM-475Z	E.CAPACITOR	4.7MF 20% 50V	
	C9303	QEKC1AM-107Z	E.CAPACITOR	100MF 20% 10V	
	C9401	QEKC1AM-227Z	E.CAPA I.M	220MF 20% 10V	
	C9402	QEKC1AM-107Z	E.CAPACITOR	100MF 20% 10V	
	C9403	QDYB1CM-103Y	C.CAPACITOR		
	C9404	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C9501	QETN1AM-477Z	E CAPACITOR	470MF 20% 10V	
⚠	D 901	6A10E2	SI DIODE		
⚠	D 902	6A10E2	SI DIODE		
⚠	D 903	6A10E2	SI DIODE		
⚠	D 904	6A10E2	SI DIODE		
	D3300	MTZJ4.3B-T2	ZENER DIODE		
	D3400	1SS133-T2	SI DIODE		
	D3401	1SS133-T2	SI DIODE		
	D3402	1SS133-T2	SI DIODE		
	D3403	1SS133-T2	SI DIODE		
	D3504	1SS133-T2	SI DIODE		
	D3505	1SS133-T2	SI DIODE		
	D3800	MTZJ6.8B-T2	ZENER DIODE		
	D9001	1SS133-T2	SI DIODE		
	D9002	MTZJ8.2C-T2	ZENER DIODE		
	D9003	MTZJ10A-T2	ZENER DIODE		
	D9101	1SR35-100A-T5	SI DIODE		
	D9201	MTZJ4.3B-T2	ZENER DIODE		
	D9301	MTZJ3.9B-T2	Z DIODE IM		
	D9302	1SS133-T2	SI DIODE		
	D9303	1SS133-T2	SI DIODE		
	D9401	MTZJ5.1B-T2	ZENER DIODE		
	D9402	MTZJ6.8B-T2	ZENER DIODE		
	D9501	1SS133-T2	SI DIODE		
	EP901	QNZ0136-001Z	EARTH PLATE		
	EP902	QNZ0136-001Z	EARTH PLATE		
	EP903	QNZ0136-001Z	EARTH PLATE		
	FW900	QUM134-11Z4Z4	FLAT WIRE		
⚠	IC300	LA4628	IC		
	IC301	BA15218N	IC		
	IC302	LC75342	IC		
	IC303	LB1641	IC		
	J 300	QNB0090-001	SPK TERMINAL		
	J 301	QNN0215-001	PIN JACK		
	J 302	QNS0030-001	JACK		
⚠	J 901	QMCB250-V02	AC SOCKET	J VER	
	K3800	QQR0621-001Z	FERRITE BEADS		

■ Electrical parts list (Main board)

Block No. 01

⚠	Item	Parts number	Parts name	Remarks	Area
	K9100	QQR0621-001Z	FERRITE BEADS		
	K9401	QQR0621-001Z	FERRITE BEADS		
	L9401	QQL244K-100Z	INDUCTOR		
	Q1150	2SD2144S/VW/-T	TRANSISTOR		
	Q1400	KTC3199/GL/-T	TR I/M		
	Q1800	KTC3199/GL/-T	TR I/M		
	Q2150	2SD2144S/VW/-T	TRANSISTOR		
	Q2400	KTC3199/GL/-T	TR I/M		
	Q2800	KTC3199/GL/-T	TR I/M		
	Q3150	KRA101M-T	TR I/M		
	Q3800	KRA101M-T	TR I/M		
⚠	Q9001	KTA1046/Y/	TRANSISTOR *		
	Q9002	KTC3199/GL/-T	TR I/M		
	Q9003	KTA1267/YG/-T	TRANSISTOR		
	Q9004	KRC114M-T	TR I.M *		
	Q9005	DTA144TS-T	D.TRANSISTOR		
	Q9006	KTC3199/GL/-T	TR I/M		
	Q9007	KTC3199/GL/-T	TR I/M		
	Q9201	KTB772/Y/	TR		
	Q9202	KTC3199/GL/-T	TR I/M		
	Q9301	KTA1267/YG/-T	TRANSISTOR		
	Q9302	KTC3199/GL/-T	TR I/M		
	Q9401	KTC3199/GL/-T	TR I/M		
	Q9402	KTC3199/GL/-T	TR I/M		
	Q9403	DTC114YS-T	TR I.M		
	Q9501	2SD2144S/VW/-T	TRANSISTOR		
	R 901	QRZ9044-335	COMP.RESISTOR	3.3M 1/0W	
	R1100	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1101	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R1102	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R1150	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1151	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1200	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R1300	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R1301	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R1302	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R1303	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R1304	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1305	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1306	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1307	QRE141J-362Y	C RESISTOR	3.6K 5% 1/4W	
	R1400	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1401	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R1402	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R1501	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R1503	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R1507	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R1600	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R1601	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R1800	QRE141J-912Y	C RESISTOR	9.1K 5% 1/4W	
	R1801	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R1802	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R1803	QRE141J-622Y	C RESISTOR	6.2K 5% 1/4W	
	R2100	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R2101	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R2102	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R2150	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2151	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2200	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R2300	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R2301	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R2302	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R2303	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R2304	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R2305	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R2306	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2307	QRE141J-362Y	C RESISTOR	3.6K 5% 1/4W	
	R2400	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R2401	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R2402	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R2501	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R2503	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R2507	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R2600	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R2601	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R2800	QRE141J-912Y	C RESISTOR	9.1K 5% 1/4W	
	R2801	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R2802	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R2803	QRE141J-622Y	C RESISTOR	6.2K 5% 1/4W	
	R3100	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R3300	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R3301	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R3400	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R3401	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R3402	QRE141J-124Y	C RESISTOR	120K 5% 1/4W	
	R3403	QRE141J-154Y	C RESISTOR	150K 5% 1/4W	
	R3404	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R3405	QRE141J-513Y	C RESISTOR	51K 5% 1/4W	
	R3500	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R3501	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R3502	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R3503	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R9001	QRE141J-1R0Y	C RESISTOR	1.0 5% 1/4W	
	R9002	QRE141J-1R0Y	C RESISTOR	1.0 5% 1/4W	
	R9003	QRE141J-1R0Y	C RESISTOR	1.0 5% 1/4W	
	R9004	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R9005	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R9006	QRE141J-242Y	C RESISTOR	2.4K 5% 1/4W	
	R9007	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R9008	QRE141J-682Y	C RESISTOR	CC8K 5% 1/4W	
⚠	R9009	QRZ9005-680X	F.RES. I.M	68 1/0W	
⚠	R9010	QRZ9005-680X	F.RES. I.M	68 1/0W	
⚠	R9011	QRZ9005-680X	F.RES. I.M	68 1/0W	
	R9012	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R9013	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	R9014	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R9015	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R9016	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R9017	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R9018	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
⚠	R9019	QRZ9005-680X	F.RES. I.M	68 1/0W	
⚠	R9100	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
	R9102	QRZ9006-5R6X	F.RES.I.M	5.6 1/0W	
	R9201	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R9202	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R9203	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R9301	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R9302	QRE141J-333Y	C RESISTOR	33K 5% 1/4W	
	R9303	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R9304	QRE141J-390Y	C RESISTOR	39 5% 1/4W	
	R9403	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R9404	QRE141J-3R9Y	C RESISTOR	3.9 5% 1/4W	
	R9405	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R9501	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	W 300	QJK015-021002	WIRE	SECONDARY	
	W 301	QJK017-051400	WIRE		
	W 901	WJK0070-001A	E-SI C WIRE C-B		
⚠	Z 901	QNG0020-001Z	FUSE CLIP		

■ **Electrical parts list (Main board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
⚠	Z 902	QNG0020-001Z	FUSE CLIP		
⚠	Z 903	QNG0020-001Z	FUSE CLIP		
⚠	Z 904	QNG0020-001Z	FUSE CLIP		

■ Electrical parts list (Tuner board)

Block No. 02

⚠	Item	Parts number	Parts name	Remarks	Area
	CN711	QGB1214K1-14S	CONNECTOR	TO MAIN PWB	
	CN712	QGB1214K1-20S	CONNECTOR	TO MAIN PWB	
	CN721	QGA2001C1-03	3P PLUG ASSY	TO CD DOOR SW P	
	CN766	QGF1205C1-13	CONNECTOR	TO CD PWB	
	CN781	QGB1216J1-08S	CONNECTOR	TO FRONT SW PWB	
	CN881	QGB1216K1-08S	CONNECTOR		
	C7001	NCS21HJ-180X	C CAPACITOR	CLOCK	
	C7002	NCS21HJ-180X	C CAPACITOR	CLOCK	
	C7004	NCS21HJ-360X	C CAPACITOR	MAIN CLOCK SHIF	
	C7005	NCS21HJ-390X	C CAPACITOR	MAIN CLOCK SHIF	
	C7006	NCS21HJ-200X	C CAPACITOR	MAIN CLOCK	
	C7007	NCS21HJ-220X	C CAPACITOR	MAIN CLOCK	
	C7008	NCB21HK-102X	C CAPACITOR		
	C7009	NCB21HK-102X	C CAPACITOR		
	C7011	QEKC1AM-107Z	E.CAPACITOR	100MF 20% 10V	
	C7012	NCB21HK-103X	C CAPACITOR		
	C7013	QFVF1HJ-104Z	TF CAPACITOR	.10MF 5% 50V	
	C7014	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C7031	QETN0JM-228Z	E CAPACITOR	BACKUP CAPACITO	
	C7051	QETN1HM-684Z	E CAPACITOR	.68MF 20% 50V	
	C7052	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C7081	NCB21CK-104X	C.CAPA. C.M	AM LCD NOISE	
	C7601	NCS21HJ-151X	C CAPACITOR		
	C7602	NCS21HJ-151X	C CAPACITOR		
	C7623	NCS21HJ-101X	C CAPACITOR		
	C7624	NCS21HJ-101X	C CAPACITOR		
	C7633	NCB21HK-102X	C CAPACITOR		
	C7641	NCS21HJ-151X	C CAPACITOR		
	C7701	NCS21HJ-151X	C CAPACITOR		
	C7702	NCS21HJ-151X	C CAPACITOR		
	C7704	NCS21HJ-101X	C CAPACITOR		
	C7723	NCB21HK-102X	C CAPACITOR		
	C7724	NCB21HK-102X	C CAPACITOR		
	C7734	NCB21HK-102X	C CAPACITOR		
	C7801	NCB21HK-103X	C CAPACITOR	MICOM NOISE	
	C7802	NCB21HK-103X	C CAPACITOR	MICOM NOISE	
	C7803	NCB21HK-102X	C CAPACITOR		
	C7804	NCB21HK-103X	C CAPACITOR		
	C7809	NCB21HK-102X	C CAPACITOR		
	C7810	NCB21HK-103X	C CAPACITOR		
	C8001	NCB21HK-102X	C CAPACITOR		
	C8002	QEK41CM-476	E.CAPACITOR	47MF 20% 16V	
	C8003	NCB21HK-103X	C CAPACITOR		
	C8004	NCB21HK-103X	C CAPACITOR		
	C8011	NCB21HK-103X	C CAPACITOR		
	C8022	NCB21HK-103X	C CAPACITOR		
	DI701	QLD0119-001	LCD MODULE	44 PIN LCD	
	D7001	1SS133-T2	SI DIODE	US5V	
	D7011	MTZJ8.2B-T2	DIODE	SHORT HOGO	
	D7012	1SS133-T2	SI DIODE	SHORT HOGO	
	D7013	1SS133-T2	SI DIODE		
	D7031	1SS133-T2	SI DIODE	BACK UP	
	D7032	1SS133-T2	SI DIODE	CLOCK	
	D7051	1SS133-T2	SI DIODE	RESET	
	D7061	MTZJ5.1C-T2	ZENER DIODE	BACK UP CONT.	
	D7091	1SS133-T2	SI DIODE	US5V	
	D7092	1SS133-T2	SI DIODE	5V-REMCON&STBLE	
	D8003	SLR-342VC-T	LED	RED LED	
	IC701	UPD78064GF-155	IC	SYSTEM MICOM	
	IC703	KIA78S06P-T	IC	US6V REG	
	IC801	GP1U261X	IR DETECT UNIT		
	K7001	NQR0006-001X	FERRITE BEAD	ICVSS	
	K7002	NQR0006-001X	FERRITE BEAD	AVSS	
	K7004	NQR0006-001X	FERRITE BEAD	SW GND	

⚠	Item	Parts number	Parts name	Remarks	Area
	K7005	NQR0006-001X	FERRITE BEAD	VSS	
	L7002	QQL231K-100Y	INDUCTOR	US5V	
	L7003	QQL231K-470Y	INDUCTOR	AVDD & VDD	
	L7005	QQL231K-4R7Y	INDUCTOR	AVREF	
	PP701	QZW0007-001	POST PIN		
	Q7001	2SC2668/O/-T	TRANSISTOR	CLOCK SHIFT	
	Q7002	2SC2668/O/-T	TRANSISTOR	CLOCK SHIFT	
	Q7031	2SA1037AK/RS/-X	TRANSISTOR	SW5V	
	Q7051	DTC114TKA-X	TRANSISTOR	RESET SW	
	Q7061	2SC2412K/R/-X	TRANSISTOR	BACKUP CONT	
	Q7091	2SC2412K/R/-X	TRANSISTOR	POUT DRIVER	
	Q7601	DTC144TKA-X	TRANSISTOR		
	Q7602	DTC144TKA-X	TRANSISTOR		
	Q7603	2SC2412K/R/-X	TRANSISTOR		
	Q8002	DTA114TKA-X	DIGITAL.TR		
	R7005	NRSA02J-822X	MG RESISTOR		
	R7006	NRSA02J-822X	MG RESISTOR		
	R7031	NRSA02J-331X	MG RESISTOR		
	R7032	NRSA02J-103X	MG RESISTOR		
	R7033	NRSA02J-102X	MG RESISTOR		
	R7051	NRSA02J-103X	MG RESISTOR		
	R7052	NRSA02J-103X	MG RESISTOR		
	R7061	NRSA02J-333X	MG RESISTOR		
	R7062	NRSA02J-473X	MG RESISTOR		
	R7063	NRSA02J-104X	MG RESISTOR		
	R7081	NRSA02J-104X	MG RESISTOR		
	R7082	NRSA02J-104X	MG RESISTOR		
	R7083	NRSA02J-104X	MG RESISTOR		
	R7084	NRSA02J-273X	MG RESISTOR		
	R7429	NRSA02J-913X	MG RESISTOR		
	R7430	NRSA02J-102X	MG RESISTOR		
	R7528	NRSA02J-223X	MG RESISTOR		
	R7529	NRSA02J-473X	MG RESISTOR		
	R7530	NRSA02J-103X	MG RESISTOR		
	R7602	NRSA02J-102X	MG RESISTOR		
	R7614	NRSA02J-103X	MG RESISTOR		
	R7615	NRSA02J-103X	MG RESISTOR		
	R7619	NRSA02J-122X	MG RESISTOR		
	R7620	NRSA02J-102X	MG RESISTOR		
	R7621	NRSA02J-122X	MG RESISTOR		
	R7622	NRSA02J-102X	MG RESISTOR		
	R7625	NRSA02J-823X	MG RESISTOR		
	R7628	NRSA02J-823X	MG RESISTOR		
	R7629	NRSA02J-103X	MG RESISTOR		
	R7630	NRSA02J-563X	MG RESISTOR		
	R7631	NRSA02J-104X	MG RESISTOR		
	R7632	NRSA02J-103X	MG RESISTOR		
	R7633	NRSA02J-103X	MG RESISTOR		
	R7634	NRSA02J-103X	MG RESISTOR		
	R7635	NRSA02J-104X	MG RESISTOR		
	R7639	NRSA02J-222X	MG RESISTOR		
	R7641	NRSA02J-102X	MG RESISTOR		
	R7642	NRSA02J-102X	MG RESISTOR		
	R7647	NRSA02J-104X	MG RESISTOR		
	R7648	NRSA02J-394X	MG RESISTOR		
	R7649	NRSA02J-823X	MG RESISTOR		
	R7651	NRSA02J-473X	MG RESISTOR		
	R7652	NRSA02J-473X	MG RESISTOR		
	R7655	NRSA02J-102X	MG RESISTOR		
	R7701	NRSA02J-102X	MG RESISTOR		
	R7702	NRSA02J-102X	MG RESISTOR		
	R7703	NRSA02J-102X	MG RESISTOR		
	R7704	NRSA02J-103X	MG RESISTOR		
	R7705	NRSA02J-102X	MG RESISTOR		

■ Electrical parts list (Tuner board)

Block No. 02

⚠	Item	Parts number	Parts name	Remarks	Area
	R7711	NRSA02J-222X	MG RESISTOR		
	R7712	NRSA02J-102X	MG RESISTOR		
	R7713	NRSA02J-222X	MG RESISTOR		
	R7715	NRSA02J-222X	MG RESISTOR		
	R7716	NRSA02J-222X	MG RESISTOR		
	R7717	NRSA02J-472X	MG RESISTOR		
	R7718	NRSA02J-102X	MG RESISTOR		
	R7719	NRSA02J-102X	MG RESISTOR		
	R7720	NRSA02J-102X	MG RESISTOR		
	R7721	NRSA02J-102X	MG RESISTOR		
	R7722	NRSA02J-102X	MG RESISTOR		
	R7723	NRSA02J-222X	MG RESISTOR		
	R7724	NRSA02J-222X	MG RESISTOR		
	R7725	NRSA02J-222X	MG RESISTOR		
	R7726	NRSA02J-222X	MG RESISTOR		
	R7728	NRSA02J-222X	MG RESISTOR		
	R7729	NRSA02J-222X	MG RESISTOR		
	R7730	NRSA02J-222X	MG RESISTOR		
	R7731	NRSA02J-222X	MG RESISTOR		
	R7732	NRSA02J-222X	MG RESISTOR		
	R7733	NRSA02J-222X	MG RESISTOR		
	R7734	NRSA02J-222X	MG RESISTOR		
	R7735	NRSA02J-222X	MG RESISTOR		
	R7738	NRSA02J-222X	MG RESISTOR		
	R7739	NRSA02J-222X	MG RESISTOR		
	R7741	NRSA02J-222X	MG RESISTOR		
	R7742	NRSA02J-222X	MG RESISTOR		
	R7743	NRSA02J-222X	MG RESISTOR		
	R7744	NRSA02J-222X	MG RESISTOR		
	R7745	NRSA02J-222X	MG RESISTOR		
	R7747	NRSA02J-222X	MG RESISTOR		
	R7748	NRSA02J-153X	MG RESISTOR		
	R7749	NRSA02J-123X	MG RESISTOR		
	R7750	NRSA02J-222X	MG RESISTOR		
	R7799	NRSA02J-102X	MG RESISTOR		
	R8001	NRSA02J-102X	MG RESISTOR		
	R8002	NRSA02J-102X	MG RESISTOR		
	R8003	NRSA02J-122X	MG RESISTOR		
	R8004	NRSA02J-123X	MG RESISTOR		
	R8005	NRSA02J-823X	MG RESISTOR		
	R8011	NRSA02J-102X	MG RESISTOR		
	R8012	NRSA02J-102X	MG RESISTOR		
	R8013	NRSA02J-122X	MG RESISTOR		
	R8014	NRSA02J-152X	MG RESISTOR		
	R8015	NRSA02J-222X	MG RESISTOR		
	R8016	NRSA02J-272X	MG RESISTOR		
	R8017	NRSA02J-392X	MG RESISTOR		
	R8018	NRSA02J-562X	MG RESISTOR		
	R8019	NRSA02J-103X	MG RESISTOR		
	R8020	NRSA02J-183X	MG RESISTOR		
	R8021	NRSA02J-433X	MG RESISTOR		
	R8031	NRSA02J-681X	MG RESISTOR		
	S8001	QSW0674-001Z	TACT SW	REVERSE MODE	
	S8002	QSW0674-001Z	TACT SW	REC	
	S8003	QSW0674-001Z	TACT SW	AUX	
	S8004	QSW0674-001Z	TACT SW	POWER	
	S8011	QSW0674-001Z	TACT SW	OPEN/CLOSE	
	S8012	QSW0674-001Z	TACT SW	VOLUME -	
	S8013	QSW0674-001Z	TACT SW	VOLUME +	
	S8014	QSW0674-001Z	TACT SW	AHB PRO	
	S8015	QSW0674-001Z	TACT SW	TIMER	
	S8016	QSW0674-001Z	TACT SW	CLOCK	
	S8017	QSW0674-001Z	TACT SW	CD	
	S8018	QSW0674-001Z	TACT SW	TUNER	

⚠	Item	Parts number	Parts name	Remarks	Area
	S8019	QSW0674-001Z	TACT SW	TAPE	
	S8020	QSW0674-001Z	TACT SW	DOWN	
	S8021	QSW0674-001Z	TACT SW	STOP	
	S8022	QSW0674-001Z	TACT SW	UP	
	S8101	QSW0451-001	DETECT SW	OPEN SWITCH	
	S8102	QSW0451-001	DETECT SW	CLOSE SWITCH	
	W 701	QUM154-14Z4Z4	WIRE		
	W 821	QJK018-032403			
	X7001	QAX0401-001	CRYSTAL	SUB CLOCK	
	X7002	QAX0410-001	CERA LOCK	MAIN CLOCK	

■ Electrical parts list (CD board)

Block No. 03

⚠	Item	Parts number	Parts name	Remarks	Area
	CN601	QGF1201F3-13	CONNECTOR		
	CN602	QGF1201F3-10	CONNECTOR		
	CN603	QGF1016F1-16	FFC/FPC CONNE		
	CN605	QGA2001C1-06	6P PLUG ASSY		
	C6001	QEKC0JM-107Z	E.CAPA I.M	100MF 20% 6.3V	
	C6002	QEK41CM-106	E.CAPA I.M	10MF 20% 16V	
	C6003	NDC21HJ-3R5X	C CAPACITOR	x-f-:TDK	
	C6005	NCS21HJ-331X	C CAPACITOR		
	C6007	NCB21HK-222X	C CAPACITOR		
	C6008	QEKC1HM-105Z	E.CAPACITOR	1.0MF 20% 50V	
	C6009	NCS21HJ-101X	C CAPACITOR		
	C6010	NCB21HK-273X	C CAPACITOR		
	C6011	NCB21HK-222X	C CAPACITOR		
	C6012	NCB21HK-103X	C CAPACITOR		
	C6014	NCB21EK-104X	C CAPACITOR		
	C6015	NCB21HK-223X	C CAPACITOR		
	C6016	NCB21HK-223X	C CAPACITOR		
	C6017	NCB21HK-223X	C CAPACITOR		
	C6018	NCB21HK-222X	C CAPACITOR		
	C6019	NCS21HJ-271X	C CAPACITOR		
	C6020	NCS21HJ-181X	C CAPACITOR		
	C6021	NCS21HJ-821X	C CAPACITOR		
	C6022	QEKC0JM-476Z	E.CAPACITOR	47MF 20% 6.3V	
	C6023	NCB21EK-104X	C CAPACITOR		
	C6028	NCB21EK-473X	C CAPACITOR		
	C6029	QEKC0JM-107Z	E.CAPA I.M	100MF 20% 6.3V	
	C6031	QEKC1AM-227Z	E.CAPA I.M	220MF 20% 10V	
	C6032	QEKC0JM-107Z	E.CAPA I.M	100MF 20% 6.3V	
	C6051	NDC21HJ-120X	C CAPACITOR		
	C6052	NDC21HJ-150X	C CAPACITOR		
	C6053	NCB21HK-223X	C CAPACITOR		
	C6055	NCB21EK-473X	C CAPACITOR		
	C6058	NCS21HJ-6R0X	C CAPACITOR		
	C6061	NCS21HJ-471X	C CAPACITOR		
	C6062	NCB21HK-223X	C CAPACITOR		
	C6063	NCB21HK-223X	C CAPACITOR		
	C6064	NCB21HK-223X	C CAPACITOR		
	C6065	NCB21CK-334X	C CAPACITOR		
	C6071	NCB21HK-222X	C CAPACITOR		
	C6072	NCB21HK-222X	C CAPACITOR		
	C6073	QEKC1AM-227Z	E.CAPA I.M	220MF 20% 10V	
	C6074	QEKC1AM-227Z	E.CAPA I.M	220MF 20% 10V	
	C6075	NCB21HK-102X	C CAPACITOR		
	C6076	NCB21HK-102X	C CAPACITOR		
	C6077	NCB21HK-223X	C CAPACITOR		
	C6080	QEKC1AM-227Z	E.CAPA I.M	220MF 20% 10V	
	C6081	QEKC1AM-227Z	E.CAPA I.M	220MF 20% 10V	
	C6083	NCB21HK-223X	C CAPACITOR		
	C6089	NCB21HK-472X	C CAPACITOR		
	C6090	NCB21HK-153X	C CAPACITOR		
	C6091	QEQF1HM-105Z	NP E CAPACITOR	1.0MF 20% 50V	
	C6092	QEQF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C6094	NCB21HK-104X	C CAPACITOR		
	C6096	NCS21HJ-391X	C CAPACITOR		
	C6097	NCS21HJ-391X	C CAPACITOR		
	C6098	NCS21HJ-391X	C CAPACITOR		
	C6099	NCS21HJ-391X	C CAPACITOR		
	C6154	NCS21HJ-151X	C CAPACITOR		
	C6156	NCS21HJ-151X	C CAPACITOR		
	C6157	NCS21HJ-151X	C CAPACITOR		
	C6158	NCS21HJ-151X	C CAPACITOR		
	D6061	1SS355-X	DIODE		
	D6062	1SS355-X	DIODE		
	D6063	1SS355-X	DIODE		

⚠	Item	Parts number	Parts name	Remarks	Area
	IC601	AN8806SB-W	IC		
	IC602	LA6541-X	IC		
	IC603	MN35510	IC		
	K6051	QQR0621-001Z	FERRITE BEADS		
	Q6001	2SA1037AK/R/-X	TRANSISTOR		
	Q6031	2SA952/LK/-T	TRANSISTOR		
	R6001	NRSA02J-123X	MG RESISTOR		
	R6002	NRSA02J-225X	MG RESISTOR		
	R6003	NRSA02J-102X	MG RESISTOR		
	R6005	NRSA02J-124X	MG RESISTOR		
	R6006	NRSA02J-473X	MG RESISTOR		
	R6007	NRSA02J-273X	MG RESISTOR		
	R6009	NRSA02J-393X	MG RESISTOR		
	R6010	NRSA02J-104X	MG RESISTOR		
	R6012	NRSA02J-103X	MG RESISTOR		
	R6013	NRSA02J-121X	MG RESISTOR		
	R6014	NRSA02J-100X	MG RESISTOR		
	R6015	NRSA02J-120X	MG RESISTOR		
	R6016	NRSA02J-910X	MG RESISTOR		
	R6021	NRSA02J-101X	MG RESISTOR		
	R6022	NRSA02J-101X	MG RESISTOR		
	R6023	NRSA02J-101X	MG RESISTOR		
	R6024	NRSA02J-104X	MG RESISTOR		
	R6025	NRSA02J-104X	MG RESISTOR		
	R6026	NRSA02J-393X	MG RESISTOR		
	R6027	NRSA02J-393X	MG RESISTOR		
	R6028	NRSA02J-393X	MG RESISTOR		
	R6029	NRSA02J-393X	MG RESISTOR		
	R6031	NRSA02J-0R0X	MG RESISTOR		
	R6032	NRSA02J-0R0X	MG RESISTOR		
	R6041	NRSA02J-433X	MG RESISTOR		
	R6042	NRSA02J-472X	MG RESISTOR		
	R6043	NRSA02J-123X	MG RESISTOR		
	R6044	NRSA02J-563X	MG RESISTOR		
	R6045	NRSA02J-433X	MG RESISTOR		
	R6046	NRSA02J-0R0X	MG RESISTOR		
	R6047	NRSA02J-332X	MG RESISTOR		
	R6048	NRSA02J-222X	MG RESISTOR		
	R6049	NRSA02J-152X	MG RESISTOR		
	R6050	NRSA02J-332X	MG RESISTOR		
	R6051	NRSA02J-102X	MG RESISTOR		
	R6052	NRSA02J-102X	MG RESISTOR		
	R6053	NRSA02J-102X	MG RESISTOR		
	R6054	NRSA02J-102X	MG RESISTOR		
	R6055	NRSA02J-102X	MG RESISTOR		
	R6056	NRSA02J-0R0X	MG RESISTOR		
	R6057	NRSA02J-0R0X	MG RESISTOR		
	R6058	NRSA02J-0R0X	MG RESISTOR		
	R6059	NRSA02J-471X	MG RESISTOR		
	R6060	NRSA02J-471X	MG RESISTOR		
	R6061	NRSA02J-104X	MG RESISTOR		
	R6063	NRSA02J-124X	MG RESISTOR		
	R6064	NRSA02J-681X	MG RESISTOR		
	R6066	NRSA02J-220X	MG RESISTOR		
	R6067	NRSA02J-220X	MG RESISTOR		
	R6068	NRSA02J-220X	MG RESISTOR		
	R6069	NRSA02J-155X	MG RESISTOR		
	R6071	NRSA02J-102X	MG RESISTOR		
	R6072	NRSA02J-102X	MG RESISTOR		
	R6076	NRSA02J-0R0X	MG RESISTOR		
	R6080	NRSA02J-0R0X	MG RESISTOR		
	R6081	NRSA02J-0R0X	MG RESISTOR		
	R6082	NRSA02J-392X	MG RESISTOR		
	R6121	NRSA02J-101X	MG RESISTOR		

■ **Electrical parts list** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	R6124	NRSA02J-0R0X	MG RESISTOR		
	W 604	QJP001-032001	WIRE		
	X6051	QAX0413-001Z	CRYSTAL		

■ Electrical parts list (Head AMP & MECHA control board) Block No.04

⚠	Item	Parts number	Parts name	Remarks	Area
	C 101	NCS21HJ-821X	C CAPACITOR	820PF 5% 50V	
	C 102	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 103	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 104	NCB21HK-333X	C CAPACITOR	.033MF 10% 50V	
	C 105	NCB21HK-222X	C CAPACITOR	2200PF 10% 50V	
	C 106	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 107	NCS21HJ-561X	C CAPACITOR	560PF 5% 50V	
	C 108	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 109	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 110	NCB21HK-682X	C.CAPA. C.M	6800PF 10% 50V	
	C 111	NCB21HK-122X	C CAPACITOR	1200PF 10% 50V	
	C 112	NCB21EK-683X	C CAPACITOR	.068MF 10% 25V	
	C 113	NCB21HK-222X	C CAPACITOR	2200PF 10% 50V	
	C 121	NCS21HJ-331X	C CAPACITOR	330PF 5% 50V	
	C 201	NCS21HJ-821X	C CAPACITOR	820PF 5% 50V	
	C 202	NCS21HJ-221X	C CAPACITOR	220PF 5% 50V	
	C 203	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 204	NCB21HK-333X	C CAPACITOR	.033MF 10% 50V	
	C 205	NCB21HK-222X	C CAPACITOR	2200PF 10% 50V	
	C 206	QEKJ1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 207	NCS21HJ-561X	C CAPACITOR	560PF 5% 50V	
	C 208	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 209	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 210	NCB21HK-682X	C.CAPA. C.M	6800PF 10% 50V	
	C 211	NCB21HK-122X	C CAPACITOR	1200PF 10% 50V	
	C 212	NCB21EK-683X	C CAPACITOR	.068MF 10% 25V	
	C 213	NCB21HK-222X	C CAPACITOR	2200PF 10% 50V	
	C 221	NCS21HJ-331X	C CAPACITOR	330PF 5% 50V	
	C 301	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 302	NCB21HK-393X	C CAPACITOR	.039MF 10% 50V	
	C 303	QEKJ0JM-227Z	E CAPACITOR	220MF 20% 6.3V	
	C 304	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 305	QEKJ1CM-226Z	E CAPACITOR	22MF 20% 16V	
	C 306	QEKJ1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 307	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 308	NCB21HK-562X	C CAPACITOR	5600PF 10% 50V	
	C 309	NCB21HK-562X	C CAPACITOR	5600PF 10% 50V	
	C 310	NCB21HK-223X	C CAPACITOR	.022MF 10% 50V	
	C 311	NCB21HK-682X	C.CAPA. C.M	6800PF 10% 50V	
	C 313	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 314	QCZ0205-155Z	ML C CAP I/M	1.5MF	
	C 315	QCZ0205-155Z	ML C CAP I/M	1.5MF	
	C 316	QFG32AJ-103Z	PP CAPACITOR	.010MF 5% 100V	
	C 318	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 319	QFG32AJ-821Z	TF CAPACITOR	820PF 5% 100V	
	C 321	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	C 322	QFG32AJ-152Z	M CAPACITOR	1500PF 5% 100V	
	C 331	QEKJ1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 351	QEK41CM-106	E CAPACITOR	10MF 20% 16V	
	C 371	QEKJ1EM-475Z	E CAPACITOR	4.7MF 20% 25V	
	C 374	QEKJ1AM-107Z	E CAPACITOR	MOTOR +B	
	C 375	QEKJ1AM-107Z	E CAPACITOR	100MF 20% 10V	
	C 376	NCB21HK-103X	C CAPACITOR	.010MF 10% 50V	
	CN 31	QGF1205F1-06	CONNECTOR	PRI/HEAD	
	CN 32	QGB2011M1-10	PWB CONECTOR	PRI/MECHA	
	CN 33	QGF1205F1-09	CONNECTOR	PRI/MICON	
	CN 34	QGF1205F1-10	CONNECTOR	PRI/AMP	
	D 301	MA152WA-X	DIODE		
	D 309	MA704A-X	S.K.DIODE		
	D 375	MA3051/M/-X	ZENER DIODE		
	FW 31	QUM024-06A2Z3	EF FLAT		
	IC 31	BA3126N	IC	HEAD SW	
	IC 32	AN7317	IC	PB&REC	
	IC 33	BU4094BCF-X	IC		

⚠	Item	Parts number	Parts name	Remarks	Area
	L 301	QQR0620-001	OSC COIL(BIAS)		
	L 303	QQL01BK-100Z	INDUCTOR		
	Q 101	DTC114TKA-X	TRANSISTOR		
	Q 102	DTC114TKA-X	TRANSISTOR	REC EQ CONT.	
	Q 201	DTC114TKA-X	TRANSISTOR		
	Q 202	DTC114TKA-X	TRANSISTOR	REC EQ CONT.	
	Q 301	DTA144EKA-X	TRANSISTOR	REC EQ CONT.	
	Q 302	2SC2001/K/-T	TR I/M		
	Q 303	2SC2001/K/-T	TR I/M		
	Q 304	2SC2001/LK/-T	TRANSISTOR		
	Q 305	2SC2001/LK/-T	TRANSISTOR		
	Q 306	2SC2412K/RS/-X	CHIP TR.C.M		
	Q 307	2SC2412K/RS/-X	CHIP TR.C.M		
	Q 308	2SC2412K/RS/-X	CHIP TR.C.M		
	Q 309	2SC2412K/RS/-X	CHIP TR.C.M		
	Q 321	DTC144EKA-X	TRANSISTOR		
	Q 323	2SC2412K/RS/-X	CHIP TR.C.M		
	Q 371	2SA952/LK/-T	TRANSISTOR	MOTER+B	
	Q 372	DTC124EKA-X	TRANSISTOR		
	Q 375	2SB562/C/-T	TRANSISTOR	SOLENOID DRIVE	
	Q 376	2SC2412K/RS/-X	CHIP TR.C.M		
	R 101	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
	R 102	NRSA02J-182X	MG RESISTOR	1.8K 5% 1/10W	
	R 103	NRSA02J-242NY	MG RESISTOR	2.4K 5% 1/10W	
	R 104	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 105	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 106	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 107	NRSA02J-123X	RES. C.M	12K 5% 1/10W	
	R 108	NRSA02J-562X	MG RESISTOR	5.6K 5% 1/10W	
	R 109	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 110	NRSA02J-472X	RES. C.M	4.7K 5% 1/10W	
	R 111	NRSA02J-333X	MG RESISTOR	33K 5% 1/10W	
	R 112	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 113	NRSA02J-472X	RES. C.M	4.7K 5% 1/10W	
	R 114	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
	R 116	NRSA02J-102X	RES. C.M	1.0K 5% 1/10W	
	R 121	NRSA02J-102X	RES. C.M	1.0K 5% 1/10W	
	R 201	NRSA02J-220X	MG RESISTOR	22 5% 1/10W	
	R 202	NRSA02J-182X	MG RESISTOR	1.8K 5% 1/10W	
	R 203	NRSA02J-242NY	MG RESISTOR	2.4K 5% 1/10W	
	R 204	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 205	NRSA02J-104X	MG RESISTOR	100K 5% 1/10W	
	R 206	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 207	NRSA02J-123X	RES. C.M	12K 5% 1/10W	
	R 208	NRSA02J-562X	MG RESISTOR	5.6K 5% 1/10W	
	R 209	NRSA02J-122X	MG RESISTOR	1.2K 5% 1/10W	
	R 210	NRSA02J-472X	RES. C.M	4.7K 5% 1/10W	
	R 211	NRSA02J-333X	MG RESISTOR	33K 5% 1/10W	
	R 212	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 213	NRSA02J-472X	RES. C.M	4.7K 5% 1/10W	
	R 214	NRSA02J-272X	MG RESISTOR	2.7K 5% 1/10W	
	R 216	NRSA02J-102X	RES. C.M	1.0K 5% 1/10W	
	R 221	NRSA02J-102X	RES. C.M	1.0K 5% 1/10W	
	R 301	NRS181J-221X	MG RESISTOR	220 5% 1/8W	
	R 303	NRSA02J-393X	MG RESISTOR	39K 5% 1/10W	
	R 304	NRS181J-101X	MG RESISTOR	100 5% 1/8W	
	R 305	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 306	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 310	NRS181J-560X	MG RESISTOR	56 5% 1/8W	
	R 311	NRS181J-560X	MG RESISTOR	56 5% 1/8W	
	R 313	NRSA02J-3R3NY	RES. C.M	3.3 5% 1/10W	
	R 314	NRSA02J-223X	RES. C.M	22K 5% 1/10W	
	R 315	NRSA02J-100X	MG RESISTOR	10 5% 1/10W	
	R 316	NRSA02J-223X	RES. C.M	22K 5% 1/10W	

■ Electrical parts list (HEAD AMP & MECHA control board) Block No. 04

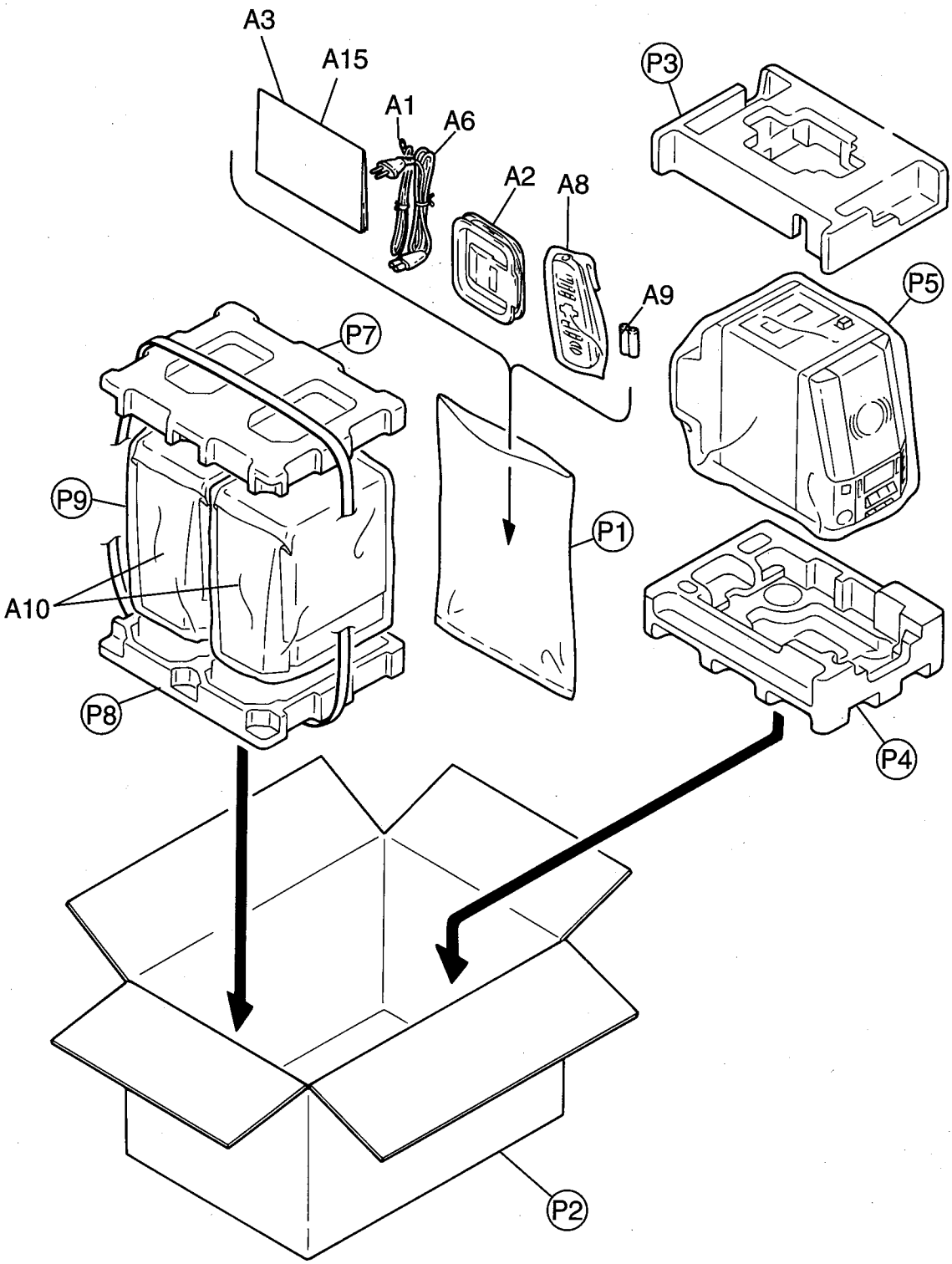
⚠	Item	Parts number	Parts name	Remarks	Area
	R 317	NRSA02J-100X	MG RESISTOR	10 5% 1/10W	
	R 319	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 322	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 327	NRSA02J-474X	MG RESISTOR	470K 5% 1/10W	
	R 332	NRSA02J-123X	RES. C.M	12K 5% 1/10W	
	R 333	NRSA02J-123X	RES. C.M	12K 5% 1/10W	
	R 335	NRSA02J-152X	MG RESISTOR	1.5K 5% 1/10W	
	R 336	NRSA02J-472X	RES. C.M	4.7K 5% 1/10W	
	R 337	NRSA02J-332X	MG RESISTOR	3.3K 5% 1/10W	
	R 338	NRSA02J-392X	MG RESISTOR	3.9K 5% 1/10W	
	R 339	NRSA02J-222X	MG RESISTOR	2.2K 5% 1/10W	
	R 340	NRS181J-391X	MG RESISTOR	390 5% 1/8W	
	R 341	NRSA02J-123X	RES. C.M	12K 5% 1/10W	
	R 342	NRSA02J-203X	MG RESISTOR	20K 5% 1/10W	
	R 343	NRSA02J-183X	MG RESISTOR	18K 5% 1/10W	
	R 351	NRSA02J-683X	MG RESISTOR	68K 5% 1/10W	
	R 352	NRSA02J-912X	RES. C.M	9.1K 5% 1/10W	
	R 371	NRSA02J-123X	RES. C.M	12K 5% 1/10W	
	R 372	NRSA02J-102X	RES. C.M	1.0K 5% 1/10W	
	R 375	NRSA02J-151X	MG RESISTOR	150 5% 1/10W	
	R 376	NRSA02J-472X	RES. C.M	4.7K 5% 1/10W	
	VR 31	QVP0008-503Z	SEMI V RESISTOR	BIAS ADJ	
	VR 32	QVP0008-503Z	SEMI V RESISTOR	BIAS ADJ	
	VR 37	QVP0008-103Z	SEMI V RESISTOR	TAPE SPEED ADJ	

■ Electrical parts list (Cassette board) Block No. 05

⚠	Item	Parts number	Parts name	Remarks	Area
	CN 1	QGB2011L1-10	10P PLUG ASSY		
	D 1	1SR139-400-T2	SI DIODE		
	IC 1	SG-105F3-BB,C	PHOTO SENSER		
	P 1	QNZ0104-001	POST PIN		
	SW 1	QSW0832-001	CASSETTE SWITCH	R.REC	
	SW 2	QSW0832-001	CASSETTE SWITCH	TAPE	
	SW 4	QSW0832-001	CASSETTE SWITCH	70U	
	SW 5	QSW0832-001	CASSETTE SWITCH	F.REC	
	SW 6	QSW0859-001	SWITCH		

Packing materials and accessories parts list

Block No. M 3 M M
Block No. M 4 M M



■ Packing parts list

Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	QPA02503503P	POLY BAG	1	FOR INST. BOOK	
	P 2	GV20060-003A	PACKING CASE	1		
	P 3	GV10038-001A	CUSHION(TOP)	1		
	P 4	GV10039-001A	CUSHION(BOTTOM)	1		
	P 5	QPC05005015P	POLY BAG	1		
	P 7	139-76335-1046	CUSHION(TOP)	1	FOR SPEAKER	
	P 8	139-76335-1047	CUSHION(BOTTOM)	1	FOR SPEAKER	
	P 9	138-73450-1073	POLY BAG	2	FOR SPEAKER	

■ Accessories list

Block No. M4MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	EWP503-001	ANT.WIRE	1		
	A 2	QAL0014-001	AM LOOP ANT	1		
	A 3	GVT0031-001A	INST BOOK	1		
	A 6	QMPE180-183-JN	POWER CORD	1		
	A 8	RM-SFSV10J	REMOCON	1		
	A 9	R6SPTT-2STSM	BATTERY	2		
	A 10	UXV10B-SPBOX	SPEAKER BOX	2		
	A 15	BT-51020-2	J=REGIST CARD	1		

<<MEMO>>

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VICTOR COMPANY OF JAPAN, LIMITED
AUDIO & COMMUNICATION BUSINESS DIVISION
PERSONAL & MOBILE NETWORK B.U 10-1,1Chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

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